



Supporting information

HLA-A01:01	HLA-A02:01	HLA-A03:01	HLA-A24:02
HLA-A26:01	HLA-B07:02	HLA-B08:01	HLA-B27:05
HLA-B39:01	HLA-B40:01	HLA-B58:01	HLA-B15:01

S1 Table: HLAs from 'HLA supertype representative' family.

Peptide	HLA	binding.score	immunogenic.score
ERFPQAEHQMA	HLA-B39:01	0.9914	0.9932
FPQAEHQMAKSSSL	HLA-B39:01	0.9925	0.9949
AALEKNMMQESAT	HLA-B58:01	0.9967	0.9921
DLGSLQPPPPRN	HLA-B58:01	0.9946	0.9962
DLGSLQPPPPRN	HLA-B15:01	0.9973	0.9904
SDLGSLQPPPPRN	HLA-B58:01	0.9981	0.9956
SDLGSLQPPPPRN	HLA-B15:01	0.9996	0.9903
LGSLQPPPPRNLP	HLA-B58:01	0.9916	0.9937
WSDLGSLQPPPPRN	HLA-B58:01	0.9948	0.9966
QAKYKDSIEMWVQ	HLA-B58:01	0.9959	0.9925
QAKYKDSIEMWVQG	HLA-B58:01	0.9934	0.9925
LASLGLASSKTHE	HLA-B58:01	0.996	0.992
LGLQMAPPAAW	HLA-B58:01	0.9954	0.9909
PEDSLKLQFIHGYR	HLA-B58:01	0.9948	0.9902
DFSLVEMEAAPFR	HLA-B58:01	0.9954	0.9908
KDFSLVEMEAAPFR	HLA-B58:01	0.9949	0.9909
DFSLVEMEAAPFRS	HLA-B15:01	0.9933	0.9921
FQNLASLGFETQL	HLA-B39:01	0.9961	0.9962
VRCWEPGPGPP	HLA-B58:01	0.9929	0.9902
CWEPGPGPPLP	HLA-B58:01	0.995	0.9914
VRCWEPGPGPPL	HLA-B58:01	0.9903	0.9949
RCWEPGPGPPLP	HLA-B58:01	0.9959	0.9941
CWEPGPGPPLPA	HLA-B58:01	0.9916	0.9942
RCWEPGPGPPLPA	HLA-B58:01	0.9953	0.9918
CWEPGPGPPLPAA	HLA-B58:01	0.9974	0.9934
EFSKMSQKEALQR	HLA-B15:01	0.9915	0.9904
AGFAAGLHCPGE	HLA-B58:01	0.9974	0.9928
CFQSTVKMLRW	HLA-B58:01	0.9933	0.9938
SCFQSTVKMLRW	HLA-B58:01	0.9991	0.9921
ISCFQSTVKMLRW	HLA-B58:01	0.9993	0.9944
RISCFQSTVKMLRW	HLA-B58:01	0.9965	0.9905

TALDLQMETSQE	HLA-B58:01	0.9932	0.9919
THLDSFLPICRVND	HLA-B39:01	0.9947	0.9906
TSSAEVTIQMGGR	HLA-B58:01	0.9988	0.9904
TSLAPEDPTFPDT	HLA-B58:01	0.992	0.9921
SLAPEDPTFPDTW	HLA-B58:01	0.9973	0.9933
FKNMRGQGRKESL	HLA-B39:01	0.9986	0.9933
PKLLDAPLLGR	HLA-B58:01	0.9937	0.9939
LCMQEELAW	HLA-B58:01	0.9959	0.9952
RGLLGIGAASTDE	HLA-B58:01	0.9967	0.9945
GLLGIGAASTDEA	HLA-B58:01	0.9902	0.9924
KGLGLDTSVPMKT	HLA-B58:01	0.9956	0.9903
RQMPEQFSVAEFL	HLA-B58:01	0.9912	0.991
FSGFLKVTEMLTF	HLA-B58:01	0.9965	0.9919
DFSGFLKVTEMLTF	HLA-B58:01	0.9922	0.9919
FSGFLKVTEMLTFF	HLA-B58:01	0.9936	0.995
ADFSGFLKVTEMQ	HLA-B58:01	0.9987	0.9952
FSGFLKVTEMQTQ	HLA-B58:01	0.9932	0.997
FSGFLKVTEMQTQ	HLA-B15:01	0.9991	0.9926
SGFLKVTEMQTQE	HLA-B58:01	0.9931	0.9954
VADFSGFLKVTEMQ	HLA-B58:01	0.9982	0.993
ADFSGFLKVTEMQT	HLA-B15:01	0.9918	0.9907
DFSGFLKVTEMQTQ	HLA-B58:01	0.9901	0.9978
DFSGFLKVTEMQTQ	HLA-B15:01	0.9925	0.9934
FSGFLKVTEMQTQE	HLA-B15:01	0.9984	0.9916
LKVTEMQTQEILRI	HLA-B58:01	0.9963	0.9959
QIIDMMGLRSHHL	HLA-B08:01	0.9956	0.9932
QMDEFHPFIEALL	HLA-B58:01	0.994	0.991
QMDDL DALLADLE	HLA-B58:01	0.9919	0.9905
QTGEGINEMFQME	HLA-B58:01	0.9904	0.9921
TGEGINEMFQMEA	HLA-B58:01	0.9961	0.9937
TGEGINEMFQMEA	HLA-B15:01	0.9956	0.992
IKQDNDLDKLLLCL	HLA-B39:01	0.9945	0.9936
ATLCFGMMW	HLA-B58:01	0.9979	0.9942
SATLCFGMMW	HLA-B58:01	0.9984	0.9922
FAETLQFIDSMARR	HLA-B58:01	0.9916	0.9948
QFIDSMARRPRHSI	HLA-B58:01	0.9903	0.9909
SRLHNKPTFSQMA	HLA-B39:01	0.9951	0.9948
MDQDGYLARW	HLA-B58:01	0.9954	0.9955
PMDQDGYLARW	HLA-B58:01	0.998	0.9917
TKELALGQDRFQV	HLA-B58:01	0.9977	0.9902
HGYWEVNGFGLFG	HLA-B58:01	0.996	0.9913

LLQDEEEEEEEA	HLA-B58:01	0.9904	0.9971
QDEEEEEEEAAE	HLA-B58:01	0.9974	0.9943
DGLLQDEEEEEEE	HLA-B58:01	0.992	0.9903
LLQDEEEEEEEAA	HLA-B58:01	0.9928	0.997
LQDEEEEEEEAAE	HLA-B58:01	0.9963	0.9956
VSGWGITNHPRNP	HLA-B58:01	0.9978	0.9957
DCFLHPFHATPN	HLA-B58:01	0.9912	0.9926
FKYDCFLHPFHAT	HLA-B15:01	0.9947	0.9914
YDCFLHPFHATPN	HLA-B58:01	0.9928	0.9912
HRQFSQMSTIPRF	HLA-B39:01	0.9928	0.9908
YSEFAMPLKLEEE	HLA-B39:01	0.9965	0.9902
FAMPLKLEELKAR	HLA-B58:01	0.9968	0.9901
LSYLQTQDTGEQM	HLA-B58:01	0.9986	0.9958
SYLQTQDTGEQMQ	HLA-B15:01	0.9993	0.9911
LSYLQTQDTGEQMQ	HLA-B58:01	0.9908	0.9934
FREAQMPEKRLTA	HLA-B39:01	0.9983	0.9945
LDTWEMGDIPAV	HLA-B15:01	0.9976	0.9918
FLDTWEMGDIPAV	HLA-B15:01	0.9973	0.9947
TGALGTTSEMFQE	HLA-B58:01	0.9956	0.9937
GALGTTSEMFQEM	HLA-B58:01	0.9961	0.9939
TTSEMFQEMATAD	HLA-B58:01	0.9965	0.9923
GALGTTSEMFQEMA	HLA-B58:01	0.9928	0.9955
LGTTSEMFQEMATA	HLA-B58:01	0.9931	0.993
TTSEMFQEMATADR	HLA-B58:01	0.9983	0.9914
TTSEMFQEMATADR	HLA-B15:01	0.9975	0.9907
GALGTTSEMRKE	HLA-B58:01	0.9943	0.9916
ADLRQLPDPAIE	HLA-B58:01	0.9986	0.9941
AADLRQLPDPAIE	HLA-B58:01	0.998	0.9927
KLSMDQEEGLKALD	HLA-B58:01	0.9955	0.9931
QNLQNKDKKKMAS	HLA-B58:01	0.9951	0.991
FKMSSATLVKASCL	HLA-B39:01	0.997	0.9916
TKLLDPKMMMLPTM	HLA-B39:01	0.9971	0.9903
LKQMAFPVDMLN	HLA-B39:01	0.9921	0.991
RKYEMQAKNKDALQ	HLA-B58:01	0.9903	0.9935
MHTFPVGMNP	HLA-B39:01	0.9901	0.9921
HTFPVGMNPRTQN	HLA-B58:01	0.9917	0.9953
MHTFPVGMNPRTQN	HLA-B39:01	0.9962	0.9906
HTFPVGMNPRTQNK	HLA-B15:01	0.9901	0.9905
EKMMSECDGGSKA	HLA-B39:01	0.9935	0.994

S2 Table: Neoantigen candidates prepared for experimental verification.

Annotation	HLA	Peptide	binding score	immunogenic score	ASmethod	patient
patient1_A3SS_1	HLA-B39:01	SHGIQKMEDF	0.9105	0.9104	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	QKMEDFRGIA	0.9744	0.9005	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	QKMEDFRGIAE	0.997	0.9076	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	QKMEDFRGIAE	0.9922	0.9699	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	GLLESHGIQKME	0.9951	0.9075	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	LLESHGIQKMED	0.9206	0.9311	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	LESHGIQKMEDF	0.9785	0.9301	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	IQKMEDFRGIAE	0.9947	0.9289	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	QKMEDFRGIAEE	0.9995	0.9347	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	QKMEDFRGIAEE	0.9986	0.9798	A3SS	patient1
patient1_A3SS_1	HLA-B15:01	QKMEDFRGIAEE	0.9999	0.9005	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	KMEDFRGIAEES	0.9928	0.9462	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	KMEDFRGIAEES	0.998	0.9197	A3SS	patient1
patient1_A3SS_1	HLA-B15:01	KMEDFRGIAEES	0.9999	0.9011	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	SGLLESHGIQKME	0.9975	0.9039	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	GLLESHGIQKMED	0.9967	0.9219	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	LESHGIQKMEDFR	0.9908	0.9116	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	ESHGIQKMEDFRG	0.9984	0.9501	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	ESHGIQKMEDFRG	0.9974	0.9196	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	ESHGIQKMEDFRG	0.9518	0.9575	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	HGIQKMEDFRGIA	0.9984	0.9373	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	HGIQKMEDFRGIA	0.9765	0.9178	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	GIQKMEDFRGIAE	0.9955	0.9166	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	IQKMEDFRGIAEE	0.9959	0.9443	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	IQKMEDFRGIAEE	0.9982	0.9069	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	QKMEDFRGIAEES	0.995	0.9074	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	QKMEDFRGIAEES	0.9982	0.9675	A3SS	patient1
patient1_A3SS_1	HLA-B15:01	QKMEDFRGIAEES	0.9997	0.9093	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	KMEDFRGIAEESF	0.9808	0.9503	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	KMEDFRGIAEESF	0.9979	0.926	A3SS	patient1
patient1_A3SS_1	HLA-B15:01	KMEDFRGIAEESF	1	0.9174	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	ISGLLESHGIQKME	0.9913	0.9088	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	ISGLLESHGIQKME	0.9953	0.9151	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	SGLLESHGIQKMED	0.9915	0.9339	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	GLLESHGIQKMEDF	0.9767	0.918	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	LLESHGIQKMEDFR	0.9976	0.9232	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	LLESHGIQKMEDFR	0.9297	0.9489	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	LESHGIQKMEDFRG	0.9935	0.9819	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	LESHGIQKMEDFRG	0.9876	0.9147	A3SS	patient1

patient1_A3SS_1	HLA-B39:01	LESHGIQKMEDFRG	0.9116	0.9719	A3SS	patient1
patient1_A3SS_1	HLA-B40:01	LESHGIQKMEDFRG	0.9955	0.9184	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	LESHGIQKMEDFRG	0.9963	0.9329	A3SS	patient1
patient1_A3SS_1	HLA-B15:01	LESHGIQKMEDFRG	0.999	0.9026	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	ESHGIQKMEDFRGI	0.9967	0.9684	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	ESHGIQKMEDFRGI	0.9868	0.9474	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	SHGIQKMEDFRGIA	0.992	0.9567	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	SHGIQKMEDFRGIA	0.9783	0.9621	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	SHGIQKMEDFRGIA	0.9908	0.9547	A3SS	patient1
patient1_A3SS_1	HLA-B40:01	SHGIQKMEDFRGIA	0.9294	0.9284	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	SHGIQKMEDFRGIA	0.9923	0.9339	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	HGIQKMEDFRGIAE	0.9921	0.9039	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	HGIQKMEDFRGIAE	0.986	0.9436	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	GIQKMEDFRGIAEE	0.935	0.9559	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	GIQKMEDFRGIAEE	0.9763	0.9068	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	IQKMEDFRGIAEES	0.9937	0.9444	A3SS	patient1
patient1_A3SS_1	HLA-B08:01	IQKMEDFRGIAEES	0.9541	0.9269	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	IQKMEDFRGIAEES	0.9436	0.9515	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	IQKMEDFRGIAEES	0.9836	0.9286	A3SS	patient1
patient1_A3SS_1	HLA-B39:01	QKMEDFRGIAEESF	0.9957	0.9651	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	QKMEDFRGIAEESF	0.9936	0.9869	A3SS	patient1
patient1_A3SS_1	HLA-B15:01	QKMEDFRGIAEESF	0.9984	0.9523	A3SS	patient1
patient1_A3SS_1	HLA-A24:02	KMEDFRGIAEESFP	0.9888	0.9012	A3SS	patient1
patient1_A3SS_1	HLA-B58:01	KMEDFRGIAEESFP	0.9915	0.9534	A3SS	patient1
patient1_A3SS_1	HLA-B15:01	KMEDFRGIAEESFP	0.9984	0.9527	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	SHGIQKMDGCL	0.9986	0.9241	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	IQKMDGCLDTE	0.974	0.914	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	IQKMDGCLDTE	0.9504	0.9332	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	QKMDGCLDTET	0.9836	0.9441	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	QKMDGCLDTET	0.9908	0.963	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	KMDGCLDTETP	0.9448	0.9746	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	KMDGCLDTETP	0.9932	0.9513	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	GLLESHGIQKMD	0.9868	0.9128	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	LESHGIQKMDGC	0.9973	0.96	A3SS	patient1
patient1_A3SS_3	HLA-A26:01	LESHGIQKMDGC	0.9653	0.917	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	LESHGIQKMDGC	0.9717	0.9714	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	ESHGIQKMDGCL	0.9877	0.9544	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	GIQKMDGCLDTE	0.9903	0.9094	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	GIQKMDGCLDTE	0.9116	0.9071	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	IQKMDGCLDTET	0.9913	0.9479	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	IQKMDGCLDTET	0.9823	0.9554	A3SS	patient1

patient1_A3SS_3	HLA-B58:01	IQKMDGCLDTET	0.9958	0.9425	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	QKMDGCLDTETP	0.9976	0.9221	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	QKMDGCLDTETP	0.9937	0.9765	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	QKMDGCLDTETP	0.9979	0.9807	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	QKMDGCLDTETP	0.9998	0.9205	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	KMDGCLDTETPT	0.9148	0.9094	A3SS	patient1
patient1_A3SS_3	HLA-B27:05	KMDGCLDTETPT	0.996	0.9058	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	KMDGCLDTETPT	0.9818	0.985	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	KMDGCLDTETPT	0.9994	0.9686	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	SGLLESHGIQKMD	0.997	0.9467	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	GLLESHGIQKMDG	0.9925	0.9129	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	GLLESHGIQKMDG	0.992	0.9382	A3SS	patient1
patient1_A3SS_3	HLA-B40:01	GLLESHGIQKMDG	0.9546	0.9408	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	GLLESHGIQKMDG	0.9946	0.9444	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	GLLESHGIQKMDG	0.9999	0.915	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	LLESHGIQKMDGC	0.9961	0.9666	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	LLESHGIQKMDGC	0.9972	0.9031	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	LESHGIQKMDGCL	0.9947	0.9598	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	LESHGIQKMDGCL	0.9965	0.9761	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	ESHGIQKMDGCLD	0.9986	0.9478	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	ESHGIQKMDGCLD	0.9958	0.9142	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	ESHGIQKMDGCLD	0.9389	0.9573	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	SHGIQKMDGCLDT	0.999	0.934	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	HGIQKMDGCLDTE	0.9951	0.9427	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	HGIQKMDGCLDTE	0.9374	0.951	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	GIQKMDGCLDTET	0.9787	0.9368	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	GIQKMDGCLDTET	0.9948	0.9327	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	IQKMDGCLDTETP	0.9985	0.9294	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	IQKMDGCLDTETP	0.9912	0.9588	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	IQKMDGCLDTETP	0.9374	0.9803	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	IQKMDGCLDTETP	0.9971	0.9688	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	IQKMDGCLDTETP	0.9999	0.9214	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	QKMDGCLDTETPT	0.9802	0.9546	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	QKMDGCLDTETPT	0.9942	0.9888	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	QKMDGCLDTETPT	0.9975	0.9893	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	QKMDGCLDTETPT	0.999	0.9524	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	KMDGCLDTETPTV	0.9796	0.9524	A3SS	patient1
patient1_A3SS_3	HLA-B27:05	KMDGCLDTETPTV	0.9969	0.9201	A3SS	patient1
patient1_A3SS_3	HLA-B40:01	KMDGCLDTETPTV	0.9188	0.9673	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	KMDGCLDTETPTV	0.992	0.9865	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	KMDGCLDTETPTV	0.9981	0.9824	A3SS	patient1

patient1_A3SS_3	HLA-A24:02	ISGLLESHGIQKMD	0.9959	0.9281	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	ISGLLESHGIQKMD	0.9651	0.9368	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	ISGLLESHGIQKMD	0.9959	0.9483	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	ISGLLESHGIQKMD	0.9993	0.9335	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	SGLLESHGIQKMDG	0.9834	0.9546	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	SGLLESHGIQKMDG	0.9538	0.9438	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	SGLLESHGIQKMDG	0.9907	0.9593	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	SGLLESHGIQKMDG	0.9986	0.9505	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	GLLESHGIQKMDGC	0.9591	0.9593	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	GLLESHGIQKMDGC	0.9321	0.9335	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	GLLESHGIQKMDGC	0.9872	0.9401	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	GLLESHGIQKMDGC	0.9973	0.9073	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	LLESHGIQKMDGCL	0.9898	0.9783	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	LLESHGIQKMDGCL	0.9809	0.9057	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	LESHGIQKMDGCLD	0.9856	0.9825	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	LESHGIQKMDGCLD	0.9726	0.9187	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	LESHGIQKMDGCLD	0.9349	0.9773	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	ESHGIQKMDGCLDT	0.9833	0.9709	A3SS	patient1
patient1_A3SS_3	HLA-A26:01	ESHGIQKMDGCLDT	0.9949	0.9062	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	ESHGIQKMDGCLDT	0.9518	0.9306	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	SHGIQKMDGCLDTE	0.9788	0.9109	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	SHGIQKMDGCLDTE	0.976	0.9566	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	HGIQKMDGCLDTET	0.9592	0.9252	A3SS	patient1
patient1_A3SS_3	HLA-B08:01	HGIQKMDGCLDTET	0.9122	0.9617	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	HGIQKMDGCLDTET	0.9632	0.938	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	GIQKMDGCLDTETP	0.9636	0.936	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	GIQKMDGCLDTETP	0.9547	0.9464	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	IQKMDGCLDTETPT	0.9818	0.9654	A3SS	patient1
patient1_A3SS_3	HLA-B40:01	IQKMDGCLDTETPT	0.9211	0.9041	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	IQKMDGCLDTETPT	0.9792	0.9813	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	IQKMDGCLDTETPT	0.9998	0.9357	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	QKMDGCLDTETPTV	0.9781	0.9445	A3SS	patient1
patient1_A3SS_3	HLA-B39:01	QKMDGCLDTETPTV	0.9734	0.9868	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	QKMDGCLDTETPTV	0.9567	0.9895	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	QKMDGCLDTETPTV	0.9711	0.9674	A3SS	patient1
patient1_A3SS_3	HLA-A24:02	KMDGCLDTETPTVS	0.974	0.9442	A3SS	patient1
patient1_A3SS_3	HLA-B58:01	KMDGCLDTETPTVS	0.9877	0.9802	A3SS	patient1
patient1_A3SS_3	HLA-B15:01	KMDGCLDTETPTVS	0.9884	0.9455	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	AKSDVTNQMEA	0.9958	0.9634	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	KSDVTNQMEAS	0.9528	0.9098	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	TNQMEASSEPP	0.9558	0.9302	A3SS	patient1

patient1_A3SS_4	HLA-B58:01	TNQMEASSEPP	0.974	0.9206	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	NQMEASSEPPPL	0.9894	0.929	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	QMEASSEPPPLD	0.9576	0.9573	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	LDAKSDVTNQME	0.9612	0.9227	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	DAKSDVTNQMEA	0.9977	0.9016	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	VTNQMEASSEPP	0.9917	0.9007	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	TNQMEASSEPPPL	0.9957	0.932	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	TNQMEASSEPPPL	0.9885	0.9154	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	NQMEASSEPPPLD	0.9329	0.9199	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	QMEASSEPPPLDA	0.993	0.9505	A3SS	patient1
patient1_A3SS_4	HLA-A24:02	LDAKSDVTNQMEA	0.9969	0.9033	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	LDAKSDVTNQMEA	0.9033	0.9657	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	LDAKSDVTNQMEA	0.9985	0.9314	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	DAKSDVTNQMEAS	0.9642	0.9128	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	VTNQMEASSEPPPL	0.961	0.9241	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	VTNQMEASSEPPPL	0.997	0.9134	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	TNQMEASSEPPPLD	0.9888	0.9555	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	TNQMEASSEPPPLD	0.9971	0.9226	A3SS	patient1
patient1_A3SS_4	HLA-B15:01	TNQMEASSEPPPLD	0.9997	0.9152	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	NQMEASSEPPPLDA	0.9918	0.9382	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	NQMEASSEPPPLDA	0.9964	0.9189	A3SS	patient1
patient1_A3SS_4	HLA-A24:02	PLDAKSDVTNQMEA	0.9833	0.9298	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	PLDAKSDVTNQMEA	0.9779	0.9149	A3SS	patient1
patient1_A3SS_4	HLA-A24:02	LDAKSDVTNQMEAS	0.9788	0.9495	A3SS	patient1
patient1_A3SS_4	HLA-A24:02	DAKSDVTNQMEASS	0.9831	0.9028	A3SS	patient1
patient1_A3SS_4	HLA-A26:01	DAKSDVTNQMEASS	0.985	0.9099	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	TNQMEASSEPPPLDA	0.9679	0.9581	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	TNQMEASSEPPPLDA	0.9866	0.9217	A3SS	patient1
patient1_A3SS_4	HLA-B15:01	TNQMEASSEPPPLDA	0.9964	0.9183	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	NQMEASSEPPPLDAK	0.9902	0.9491	A3SS	patient1
patient1_A3SS_4	HLA-B58:01	NQMEASSEPPPLDAK	0.9897	0.9134	A3SS	patient1
patient1_A3SS_4	HLA-B15:01	NQMEASSEPPPLDAK	0.9999	0.9403	A3SS	patient1
patient1_A3SS_4	HLA-B39:01	QMEASSEPPPLDAKS	0.9451	0.914	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	QMAKSSSLNV	0.9439	0.9041	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	ERFPQAEHQMA	0.9581	0.9707	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	ERFPQAEHQMA	0.9914	0.9932	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	ERFPQAEHQMA	0.9403	0.9525	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	RFPQAEHQMAK	0.9804	0.9249	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	QAEHQMAKSSS	0.9178	0.93	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	QAEHQMAKSSS	0.9514	0.9515	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	EERFPQAEHQMA	0.9929	0.9324	A3SS	patient1

patient1_A3SS_5	HLA-B39:01	EERFPQAEHQMA	0.9778	0.99	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	EERFPQAEHQMA	0.9911	0.9382	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	ERFPQAEHQMAK	0.9542	0.9022	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	ERFPQAEHQMAK	0.9236	0.9635	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	RFPQAEHQMAKS	0.986	0.9622	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	RFPQAEHQMAKS	0.9974	0.9387	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	FPQAEHQMAKSS	0.9508	0.9814	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	FPQAEHQMAKSS	0.9604	0.9481	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	QAEHQMAKSSSL	0.9974	0.9005	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	QAEHQMAKSSSL	0.9912	0.9388	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	QAEHQMAKSSSL	0.9819	0.9314	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	QMAKSSSLNVRV	0.9724	0.9624	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	VEERFPQAEHQMA	0.9935	0.9241	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	VEERFPQAEHQMA	0.9082	0.9695	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	VEERFPQAEHQMA	0.9879	0.9264	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	EERFPQAEHQMAK	0.9179	0.9769	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	ERFPQAEHQMAKS	0.9732	0.908	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	ERFPQAEHQMAKS	0.9916	0.9597	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	RFPQAEHQMAKSS	0.9943	0.9097	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	RFPQAEHQMAKSS	0.9808	0.956	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	RFPQAEHQMAKSS	0.9988	0.9121	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	FPQAEHQMAKSSS	0.9607	0.9599	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	FPQAEHQMAKSSS	0.9526	0.9875	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	FPQAEHQMAKSSS	0.9653	0.9049	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	PQAEHQMAKSSSL	0.988	0.9054	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	QAEHQMAKSSSLN	0.9902	0.9231	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	QAEHQMAKSSSLN	0.9914	0.9665	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	QAEHQMAKSSSLN	0.9964	0.9514	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	EHQMAKSSSLNVR	0.992	0.9166	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	HQMAKSSSLNVRV	0.9627	0.9473	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	QMAKSSSLNVRV	0.9814	0.9764	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	QMAKSSSLNVRV	0.9957	0.9619	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	VEERFPQAEHQMAK	0.9717	0.9182	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	VEERFPQAEHQMAK	0.9615	0.9153	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	EERFPQAEHQMAKS	0.9596	0.9406	A3SS	patient1
patient1_A3SS_5	HLA-A26:01	EERFPQAEHQMAKS	0.9165	0.9041	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	ERFPQAEHQMAKSS	0.965	0.9844	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	RFPQAEHQMAKSSS	0.9867	0.9622	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	FPQAEHQMAKSSSL	0.9814	0.9782	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	FPQAEHQMAKSSSL	0.9977	0.9711	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	FPQAEHQMAKSSSL	0.9925	0.9949	A3SS	patient1

patient1_A3SS_5	HLA-B58:01	FPQAEHQMAKSSSL	0.9324	0.9577	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	FPQAEHQMAKSSSL	0.9966	0.9343	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	PQAEHQMAKSSSLN	0.9209	0.9033	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	QAEHQMAKSSSLNV	0.9835	0.9681	A3SS	patient1
patient1_A3SS_5	HLA-B58:01	QAEHQMAKSSSLNV	0.9823	0.979	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	QAEHQMAKSSSLNV	0.9861	0.9446	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	AEHQMAKSSSLNVR	0.9872	0.9545	A3SS	patient1
patient1_A3SS_5	HLA-A24:02	EHQMAKSSSLNVRV	0.9718	0.9099	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	EHQMAKSSSLNVRV	0.9853	0.935	A3SS	patient1
patient1_A3SS_5	HLA-B39:01	EHQMAKSSSLNVRV	0.9971	0.9404	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	HQMAKSSSLNVRV	0.9696	0.96	A3SS	patient1
patient1_A3SS_5	HLA-B08:01	QMAKSSSLNVRVVE	0.9288	0.9473	A3SS	patient1
patient1_A3SS_5	HLA-B15:01	QMAKSSSLNVRVVE	0.9955	0.9448	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	YKMAAPYPGS	0.9383	0.9459	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	KMAAPYPGSG	0.9808	0.9534	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	LHVKASGYKMA	0.9436	0.9184	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	GYKMAAPYPGS	0.9936	0.9002	A3SS	patient1
patient1_A3SS_6	HLA-B08:01	YKMAAPYPGSG	0.9677	0.9608	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	YKMAAPYPGSG	0.9914	0.9701	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	YKMAAPYPGSG	0.9953	0.9686	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	YKMAAPYPGSG	0.9997	0.9607	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	LHVKASGYKMAA	0.9901	0.9433	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	LHVKASGYKMAA	0.9356	0.942	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	SGYKMAAPYPGS	0.9806	0.9531	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	SGYKMAAPYPGS	0.9935	0.9185	A3SS	patient1
patient1_A3SS_6	HLA-B08:01	GYKMAAPYPGSG	0.9846	0.9593	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	GYKMAAPYPGSG	0.9388	0.9615	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	GYKMAAPYPGSG	0.9969	0.9613	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	GYKMAAPYPGSG	0.9993	0.9368	A3SS	patient1
patient1_A3SS_6	HLA-B08:01	YKMAAPYPGSGG	0.9936	0.9323	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	YKMAAPYPGSGG	0.9986	0.9479	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	YKMAAPYPGSGG	0.9976	0.9269	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	YKMAAPYPGSGG	0.9998	0.9018	A3SS	patient1
patient1_A3SS_6	HLA-B08:01	KMAAPYPGSGGG	0.9567	0.9135	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	RGLHVKASGYKMA	0.9695	0.9083	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	LHVKASGYKMAAP	0.9782	0.9407	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	LHVKASGYKMAAP	0.9249	0.962	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	KASGYKMAAPYPG	0.9767	0.9164	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	ASGYKMAAPYPGS	0.9812	0.9607	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	ASGYKMAAPYPGS	0.9982	0.9154	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	SGYKMAAPYPGSG	0.9157	0.9397	A3SS	patient1

patient1_A3SS_6	HLA-B58:01	SGYKMAAPYPGSG	0.9926	0.9342	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	SGYKMAAPYPGSG	0.9991	0.9101	A3SS	patient1
patient1_A3SS_6	HLA-B08:01	GYKMAAPYPGSGG	0.9786	0.9198	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	GYKMAAPYPGSGG	0.9198	0.9458	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	GYKMAAPYPGSGG	0.9866	0.9343	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	YKMAAPYPGSGGG	0.9965	0.9461	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	YKMAAPYPGSGGG	0.9971	0.917	A3SS	patient1
patient1_A3SS_6	HLA-A24:02	GLHVKASGYKMAAP	0.9244	0.9483	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	GLHVKASGYKMAAP	0.991	0.9256	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	HVKASGYKMAAPYP	0.9949	0.9005	A3SS	patient1
patient1_A3SS_6	HLA-A24:02	VKASGYKMAAPYPG	0.9561	0.9374	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	VKASGYKMAAPYPG	0.9152	0.9538	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	VKASGYKMAAPYPG	0.9885	0.9279	A3SS	patient1
patient1_A3SS_6	HLA-A24:02	KASGYKMAAPYPGS	0.9518	0.9467	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	KASGYKMAAPYPGS	0.9131	0.9779	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	KASGYKMAAPYPGS	0.99	0.9652	A3SS	patient1
patient1_A3SS_6	HLA-A24:02	ASGYKMAAPYPGSG	0.9477	0.9479	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	ASGYKMAAPYPGSG	0.9407	0.958	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	ASGYKMAAPYPGSG	0.9923	0.9128	A3SS	patient1
patient1_A3SS_6	HLA-A24:02	SGYKMAAPYPGSGG	0.9611	0.927	A3SS	patient1
patient1_A3SS_6	HLA-B58:01	SGYKMAAPYPGSGG	0.9441	0.9385	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	SGYKMAAPYPGSGG	0.9918	0.9083	A3SS	patient1
patient1_A3SS_6	HLA-A24:02	GYKMAAPYPGSGGG	0.9802	0.9379	A3SS	patient1
patient1_A3SS_6	HLA-B15:01	GYKMAAPYPGSGGG	0.984	0.9132	A3SS	patient1
patient1_A3SS_6	HLA-A24:02	YKMAAPYPGSGGGG	0.9191	0.9085	A3SS	patient1
patient1_A3SS_6	HLA-B39:01	YKMAAPYPGSGGGG	0.9945	0.9523	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	EGEVLKTAHRV	0.9942	0.9261	A3SS	patient1
patient1_A3SS_7	HLA-B15:01	EGEVLKTAHRV	0.9921	0.9015	A3SS	patient1
patient1_A3SS_7	HLA-B39:01	GEVLKTAHRVD	0.9053	0.9465	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	GEVLKTAHRVD	0.9944	0.9133	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	HRVDFIAKYLGG	0.9943	0.9336	A3SS	patient1
patient1_A3SS_7	HLA-B39:01	SEGEVLKTAHRV	0.97	0.9381	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	SEGEVLKTAHRV	0.9968	0.9477	A3SS	patient1
patient1_A3SS_7	HLA-A24:02	EGEVLKTAHRVD	0.9987	0.9085	A3SS	patient1
patient1_A3SS_7	HLA-A26:01	EGEVLKTAHRVD	0.9881	0.906	A3SS	patient1
patient1_A3SS_7	HLA-B39:01	EGEVLKTAHRVD	0.9306	0.9736	A3SS	patient1
patient1_A3SS_7	HLA-B39:01	GEVLKTAHRVDF	0.9162	0.9016	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	LRKTAHRVDFIAK	0.9384	0.9213	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	TAHRVDFIAKYLGG	0.9937	0.9186	A3SS	patient1
patient1_A3SS_7	HLA-B39:01	AHRVDFIAKYLGG	0.9948	0.9485	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	AHRVDFIAKYLGG	0.9939	0.9627	A3SS	patient1

patient1_A3SS_7	HLA-B15:01	AHRVDFIAKYLGG	0.9967	0.9106	A3SS	patient1
patient1_A3SS_7	HLA-B39:01	HRVDFIAKYLGGL	0.9994	0.9301	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	HRVDFIAKYLGGL	0.9964	0.9458	A3SS	patient1
patient1_A3SS_7	HLA-B15:01	HRVDFIAKYLGGL	0.9985	0.9178	A3SS	patient1
patient1_A3SS_7	HLA-A24:02	DSEGEVLRKTAHRV	0.9746	0.9233	A3SS	patient1
patient1_A3SS_7	HLA-A26:01	DSEGEVLRKTAHRV	0.9241	0.9343	A3SS	patient1
patient1_A3SS_7	HLA-B08:01	DSEGEVLRKTAHRV	0.9767	0.9132	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	DSEGEVLRKTAHRV	0.9951	0.9771	A3SS	patient1
patient1_A3SS_7	HLA-B15:01	DSEGEVLRKTAHRV	0.9854	0.9626	A3SS	patient1
patient1_A3SS_7	HLA-A24:02	SEGEVLRKTAHRVD	0.9833	0.9391	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	SEGEVLRKTAHRVD	0.9885	0.9226	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	KTAHRVDFIAKYLG	0.9885	0.9457	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	TAHRVDFIAKYLGG	0.9641	0.9789	A3SS	patient1
patient1_A3SS_7	HLA-B15:01	TAHRVDFIAKYLGG	0.9782	0.9288	A3SS	patient1
patient1_A3SS_7	HLA-B39:01	AHRVDFIAKYLGGL	0.9881	0.9692	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	AHRVDFIAKYLGGL	0.9744	0.9593	A3SS	patient1
patient1_A3SS_7	HLA-B15:01	AHRVDFIAKYLGGL	0.9868	0.9158	A3SS	patient1
patient1_A3SS_7	HLA-B58:01	HRVDFIAKYLGGLR	0.9674	0.9709	A3SS	patient1
patient1_A3SS_7	HLA-B15:01	HRVDFIAKYLGGLR	0.9819	0.9482	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	VMLMDGASSG	0.9767	0.9438	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	LMDGASSGGG	0.9201	0.9267	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	ADKTDVMLMDG	0.9985	0.9074	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	DKTDVMLMDGA	0.9807	0.9637	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	DKTDVMLMDGA	0.9596	0.9655	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	DKTDVMLMDGA	0.9883	0.9499	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	KTDVMLMDGAS	0.9822	0.9116	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	TDVMLMDGASS	0.9761	0.9674	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	TDVMLMDGASS	0.996	0.943	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	DVMLMDGASSG	0.9917	0.9055	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	LMDGASSGGGG	0.9047	0.956	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	LMDGASSGGGG	0.9978	0.9169	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	FNADKTDVMLMD	0.9998	0.9149	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	NADKTDVMLMDG	0.9298	0.9086	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	NADKTDVMLMDG	0.9996	0.925	A3SS	patient1
patient1_A3SS_9	HLA-A24:02	ADKTDVMLMDGA	0.9948	0.9226	A3SS	patient1
patient1_A3SS_9	HLA-A26:01	ADKTDVMLMDGA	0.9619	0.9024	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	ADKTDVMLMDGA	0.9704	0.9037	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	ADKTDVMLMDGA	0.9983	0.9409	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	ADKTDVMLMDGA	0.9994	0.941	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	DKTDVMLMDGAS	0.9876	0.9398	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	DKTDVMLMDGAS	0.9913	0.9344	A3SS	patient1

patient1_A3SS_9	HLA-B15:01	DKTDVMLMDGAS	0.9998	0.9042	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	KTDVMLMDGASS	0.9865	0.9743	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	KTDVMLMDGASS	0.9987	0.9414	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	TDVMLMDGASSG	0.9711	0.925	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	VMLMDGASSGGG	0.9335	0.9318	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	MLMDGASSGGGG	0.9509	0.94	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	MLMDGASSGGGG	0.99	0.9262	A3SS	patient1
patient1_A3SS_9	HLA-B40:01	LMDGASSGGGGS	0.9475	0.9366	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	LMDGASSGGGGS	0.9948	0.9409	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	LMDGASSGGGGS	0.9998	0.9054	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	RFNADKTDVMLMD	0.9968	0.9518	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	RFNADKTDVMLMD	0.9957	0.9245	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	FNADKTDVMLMDG	0.9923	0.9358	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	FNADKTDVMLMDG	0.9999	0.9488	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	NADKTDVMLMDGA	0.9184	0.9576	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	NADKTDVMLMDGA	0.9985	0.9234	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	NADKTDVMLMDGA	0.9985	0.9432	A3SS	patient1
patient1_A3SS_9	HLA-A24:02	ADKTDVMLMDGAS	0.9972	0.9245	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	ADKTDVMLMDGAS	0.9807	0.9134	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	ADKTDVMLMDGAS	0.9249	0.9279	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	DKTDVMLMDGASS	0.9865	0.9408	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	DKTDVMLMDGASS	0.9858	0.9425	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	DKTDVMLMDGASS	0.9979	0.9041	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	KTDVMLMDGASSG	0.9356	0.9026	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	VMLMDGASSGGGG	0.9439	0.9044	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	MLMDGASSGGGGS	0.9847	0.9336	A3SS	patient1
patient1_A3SS_9	HLA-A24:02	LMDGASSGGGGS	0.9937	0.9179	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	LMDGASSGGGGS	0.9378	0.9665	A3SS	patient1
patient1_A3SS_9	HLA-B40:01	LMDGASSGGGGS	0.9263	0.9582	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	LMDGASSGGGGS	0.9951	0.9293	A3SS	patient1
patient1_A3SS_9	HLA-B27:05	LRFNADKTDVMLMD	0.9999	0.92	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	LRFNADKTDVMLMD	0.979	0.941	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	LRFNADKTDVMLMD	0.9846	0.9539	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	LRFNADKTDVMLMD	0.9938	0.91	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	RFNADKTDVMLMDG	0.9785	0.9594	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	RFNADKTDVMLMDG	0.9896	0.9646	A3SS	patient1
patient1_A3SS_9	HLA-B39:01	FNADKTDVMLMDGA	0.9705	0.9623	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	FNADKTDVMLMDGA	0.9944	0.9459	A3SS	patient1
patient1_A3SS_9	HLA-B15:01	FNADKTDVMLMDGA	0.999	0.9664	A3SS	patient1
patient1_A3SS_9	HLA-A24:02	ADKTDVMLMDGASS	0.9748	0.9566	A3SS	patient1
patient1_A3SS_9	HLA-B08:01	ADKTDVMLMDGASS	0.9062	0.9314	A3SS	patient1

patient1_A3SS_9	HLA-B40:01	ADKTDVMLMDGASS	0.9713	0.9168	A3SS	patient1
patient1_A3SS_9	HLA-A24:02	DKTDVMLMDGASSG	0.9758	0.9154	A3SS	patient1
patient1_A3SS_9	HLA-A24:02	KTDVMLMDGASSGG	0.9402	0.9111	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	MLMDGASSGGGGSS	0.9717	0.9302	A3SS	patient1
patient1_A3SS_9	HLA-A24:02	LMDGASSGGGGSSSE	0.9687	0.9482	A3SS	patient1
patient1_A3SS_9	HLA-B58:01	LMDGASSGGGGSSSE	0.9758	0.9044	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	RAFAIYTSISIF	0.9955	0.9142	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	LRAFAIYTSISIF	0.9975	0.9407	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	RAFAIYTSISIFM	0.9851	0.9115	A3SS	patient1
patient1_A3SS_12	HLA-B27:05	SIFMNTAIIPIAAV	0.9964	0.932	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	SIFMNTAIIPIAAV	0.999	0.9468	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	SLRAFAIYTSISIF	0.9993	0.9211	A3SS	patient1
patient1_A3SS_12	HLA-B58:01	LRAFAIYTSISIFM	0.9865	0.9104	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	LRAFAIYTSISIFM	0.9803	0.9215	A3SS	patient1
12						
patient1_A3SS_12	HLA-B15:01	RAFAIYTSISIFMN	0.9677	0.9082	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	FAIYTSISIFMNTA	0.9908	0.9199	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	ISIFMNTAIIPIAAV	0.9953	0.9106	A3SS	patient1
patient1_A3SS_12	HLA-B27:05	SIFMNTAIIPIAAVL	0.9956	0.9408	A3SS	patient1
patient1_A3SS_12	HLA-B58:01	SIFMNTAIIPIAAVL	0.971	0.9197	A3SS	patient1
patient1_A3SS_12	HLA-B15:01	SIFMNTAIIPIAAVL	0.9992	0.9659	A3SS	patient1
patient1_A3SS_33	HLA-B15:01	WPGPCANLVRT	0.9639	0.9003	A3SS	patient1
patient1_A3SS_33	HLA-B58:01	RWPGPCANLVRT	0.9569	0.9794	A3SS	patient1
patient1_A3SS_33	HLA-B15:01	RWPGPCANLVRT	0.983	0.945	A3SS	patient1
patient1_A3SS_33	HLA-B08:01	WPGPCANLVRTL	0.9749	0.9339	A3SS	patient1
patient1_A3SS_33	HLA-B39:01	WPGPCANLVRTL	0.9409	0.9297	A3SS	patient1
patient1_A3SS_33	HLA-A24:02	CRWPGPCANLVRT	0.9325	0.9281	A3SS	patient1
patient1_A3SS_33	HLA-B39:01	CRWPGPCANLVRT	0.9321	0.9644	A3SS	patient1
patient1_A3SS_33	HLA-B58:01	CRWPGPCANLVRT	0.983	0.9691	A3SS	patient1
patient1_A3SS_33	HLA-B08:01	RWPGPCANLVRTL	0.9703	0.9109	A3SS	patient1
patient1_A3SS_33	HLA-B58:01	RWPGPCANLVRTL	0.9845	0.9284	A3SS	patient1
patient1_A3SS_33	HLA-B08:01	WPGPCANLVRTL	0.9804	0.9332	A3SS	patient1
patient1_A3SS_33	HLA-B58:01	GPCANLVRTLIRP	0.9201	0.9292	A3SS	patient1
patient1_A3SS_33	HLA-B08:01	NLVRTLIRPTYRV	0.9187	0.9037	A3SS	patient1
patient1_A3SS_33	HLA-A24:02	CRWPGPCANLVRTL	0.9801	0.9293	A3SS	patient1
patient1_A3SS_33	HLA-B39:01	CRWPGPCANLVRTL	0.9062	0.9204	A3SS	patient1
patient1_A3SS_33	HLA-B58:01	RWPGPCANLVRTL	0.9772	0.9294	A3SS	patient1
patient1_A3SS_33	HLA-A24:02	WPGPCANLVRTLIR	0.9516	0.9417	A3SS	patient1
patient1_A3SS_33	HLA-A24:02	PGPCANLVRTLIRP	0.9365	0.9553	A3SS	patient1
patient1_A3SS_33	HLA-B58:01	CANLVRTLIRPTYR	0.9444	0.9527	A3SS	patient1
patient1_A3SS_33	HLA-B58:01	ANLVRTLIRPTYRV	0.9365	0.915	A3SS	patient1

patient1_A3SS_34	HLA-B15:01	QQAVMLQQMM	0.9941	0.9781	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	AVMLQQMMQE	0.9043	0.9696	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	LQQMMQESAT	0.9737	0.9233	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQMMQESATE	0.9787	0.9096	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QMMQESATET	0.9658	0.9222	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQQAVMLQQMM	0.9937	0.9763	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQAVMLQQMMQ	0.9434	0.9741	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	MLQQMMQESAT	0.9832	0.9274	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQMMQESATET	0.9935	0.9398	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQQQAVMLQQMM	0.998	0.9749	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQQAVMLQQMMQ	0.985	0.9728	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQAVMLQQMMQE	0.9958	0.9714	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	AVMLQQMMQESA	0.974	0.927	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	VMLQQMMQESAT	0.996	0.9348	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	MLQQMMQESATE	0.97	0.9737	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	MLQQMMQESATE	0.9553	0.9809	A3SS	patient1
patient1_A3SS_34	HLA-B40:01	LQQMMQESATET	0.9174	0.9174	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	LQQMMQESATET	0.9363	0.9818	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	LQQMMQESATET	0.9995	0.9241	A3SS	patient1
patient1_A3SS_34	HLA-B39:01	QQMMQESATETI	0.907	0.9626	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	QMMQESATETIS	0.9684	0.9388	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QMMQESATETIS	0.9733	0.9873	A3SS	patient1
patient1_A3SS_34	HLA-A24:02	LQQQAVMLQQMM	0.9459	0.903	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	LQQQAVMLQQMM	0.9994	0.9692	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQQAVMLQQMMQ	0.9972	0.9713	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QQQAVMLQQMMQE	0.9019	0.9907	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQQAVMLQQMMQE	0.9992	0.9616	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QQAVMLQQMMQES	0.9173	0.9838	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQAVMLQQMMQES	0.9994	0.9238	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	QAVMLQQMMQESA	0.9441	0.9668	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QAVMLQQMMQESA	0.9708	0.986	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QAVMLQQMMQESA	0.9899	0.9573	A3SS	patient1
patient1_A3SS_34	HLA-A24:02	AVMLQQMMQESAT	0.9739	0.916	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	AVMLQQMMQESAT	0.9356	0.9724	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	AVMLQQMMQESAT	0.9772	0.98	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	AVMLQQMMQESAT	0.9946	0.9533	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	VMLQQMMQESATE	0.9787	0.9754	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	VMLQQMMQESATE	0.9811	0.9679	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	VMLQQMMQESATE	0.9996	0.9188	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	MLQQMMQESATET	0.982	0.9821	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	MLQQMMQESATET	0.9769	0.9824	A3SS	patient1

patient1_A3SS_34	HLA-B15:01	MLQQMMQESATET	0.9998	0.93	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	LQQMMQESATETI	0.9403	0.9649	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	LQQMMQESATETI	0.9543	0.9631	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	QQMMQESATETIS	0.951	0.9535	A3SS	patient1
patient1_A3SS_34	HLA-B39:01	QQMMQESATETIS	0.9449	0.9784	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QQMMQESATETIS	0.9801	0.986	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQMMQESATETIS	0.9993	0.9184	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	QMMQESATETISN	0.9819	0.9426	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QMMQESATETISN	0.9916	0.9859	A3SS	patient1
patient1_A3SS_34	HLA-A24:02	LLQQQAVMLQQMM	0.9794	0.9438	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	LLQQQAVMLQQMM	0.9991	0.9684	A3SS	patient1
patient1_A3SS_34	HLA-A24:02	LQQQAVMLQQMMQ	0.9144	0.9076	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	LQQQAVMLQQMMQ	0.9986	0.968	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQQAVMLQQMMQE	0.9988	0.9645	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QQQAVMLQQMMQES	0.914	0.9847	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQQAVMLQQMMQES	0.999	0.9432	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QQAVMLQQMMQESA	0.9362	0.9809	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQAVMLQQMMQESA	0.9991	0.9543	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	QAVMLQQMMQESAT	0.9445	0.9664	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QAVMLQQMMQESAT	0.9811	0.9824	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QAVMLQQMMQESAT	0.9958	0.9606	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	AVMLQQMMQESATE	0.9331	0.9727	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	AVMLQQMMQESATE	0.9616	0.9751	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	AVMLQQMMQESATE	0.9982	0.9373	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	VMLQQMMQESATET	0.9396	0.9817	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	VMLQQMMQESATET	0.9609	0.9758	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	VMLQQMMQESATET	0.9991	0.9367	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	MLQQMMQESATETI	0.958	0.9799	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	MLQQMMQESATETI	0.9389	0.9838	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	MLQQMMQESATETI	0.9996	0.9243	A3SS	patient1
patient1_A3SS_34	HLA-B40:01	LQQMMQESATETIS	0.9295	0.9175	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	LQQMMQESATETIS	0.957	0.9859	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	LQQMMQESATETIS	0.9994	0.9377	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QQMMQESATETISN	0.9687	0.9901	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QQMMQESATETISN	0.9994	0.9258	A3SS	patient1
patient1_A3SS_34	HLA-B08:01	QMMQESATETISNS	0.9239	0.9654	A3SS	patient1
patient1_A3SS_34	HLA-B58:01	QMMQESATETISNS	0.9671	0.9905	A3SS	patient1
patient1_A3SS_34	HLA-B15:01	QMMQESATETISNS	0.9984	0.9508	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQAVMLQMQ	0.9478	0.9618	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	MLQQMMQESAT	0.9525	0.9088	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QMMQESATET	0.9765	0.9272	A3SS	patient1

patient1_A3SS_36	HLA-B15:01	QQQAVMLQQMQ	0.9493	0.9592	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQAVMLQQMQE	0.9787	0.9667	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	VMLQQMQESAT	0.9747	0.9174	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQQQAVMLQQMQ	0.9943	0.9611	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQQAVMLQQMQE	0.9953	0.956	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QAVMLQQMQESA	0.9097	0.9848	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QAVMLQQMQESA	0.9726	0.9443	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	AVMLQQMQESAT	0.9334	0.9805	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	AVMLQQMQESAT	0.9793	0.9484	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	VMLQQMQESATE	0.9732	0.9564	A3SS	patient1
patient1_A3SS_36	HLA-B39:01	VMLQQMQESATE	0.9017	0.9762	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	VMLQQMQESATE	0.9765	0.9706	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	MLQQMQESATET	0.9197	0.9689	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	MLQQMQESATET	0.9648	0.9851	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	MLQQMQESATET	0.9997	0.9096	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	LQQMQESATETI	0.9262	0.967	A3SS	patient1
patient1_A3SS_36	HLA-B39:01	QQMQESATETIS	0.9193	0.9586	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQMQESATETIS	0.9761	0.9843	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QMQESATETISN	0.9863	0.9816	A3SS	patient1
patient1_A3SS_36	HLA-A24:02	LQQQQAVMLQQMQ	0.9504	0.909	A3SS	patient1
patient1_A3SS_36	HLA-B40:01	LQQQQAVMLQQMQ	0.9008	0.9596	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	LQQQQAVMLQQMQ	0.9986	0.9655	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQQQAVMLQQMQE	0.9233	0.9892	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQQQAVMLQQMQE	0.9992	0.947	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQQAVMLQQMQES	0.9193	0.9795	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQAVMLQQMQESA	0.9186	0.9851	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQAVMLQQMQESA	0.9982	0.9521	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	QAVMLQQMQESAT	0.9676	0.9641	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QAVMLQQMQESAT	0.982	0.9867	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QAVMLQQMQESAT	0.9982	0.9649	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	AVMLQQMQESATE	0.9682	0.9582	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	AVMLQQMQESATE	0.9868	0.9747	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	AVMLQQMQESATE	0.9996	0.9249	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	VMLQQMQESATET	0.978	0.9711	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	VMLQQMQESATET	0.986	0.973	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	VMLQQMQESATET	0.9998	0.9267	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	MLQQMQESATETI	0.9843	0.9595	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	MLQQMQESATETI	0.9612	0.9802	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	LQQMQESATETIS	0.9733	0.9266	A3SS	patient1
patient1_A3SS_36	HLA-B39:01	LQQMQESATETIS	0.9565	0.9805	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	LQQMQESATETIS	0.9853	0.9824	A3SS	patient1

patient1_A3SS_36	HLA-B39:01	QQMQESATETISN	0.9713	0.9624	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQMQESATETISN	0.9855	0.9842	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	QMQUESATETISNS	0.9759	0.9092	A3SS	patient1
patient1_A3SS_36	HLA-B39:01	QMQUESATETISNS	0.9411	0.9776	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QMQUESATETISNS	0.9922	0.9882	A3SS	patient1
patient1_A3SS_36	HLA-A24:02	LLQQQAVMLQMQ	0.9659	0.9489	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	LLQQQAVMLQMQ	0.9989	0.9644	A3SS	patient1
patient1_A3SS_36	HLA-A24:02	LQQQAVMLQMQE	0.9189	0.9106	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	LQQQAVMLQMQE	0.9992	0.9569	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQQAVMLQMQES	0.9163	0.9786	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQAVMLQMQESA	0.9337	0.9786	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQAVMLQMQESA	0.9992	0.9424	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQAVMLQMQESAT	0.9566	0.9798	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQAVMLQMQESAT	0.9994	0.9542	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	QAVMLQMQESATE	0.9328	0.9572	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QAVMLQMQESATE	0.9807	0.9833	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QAVMLQMQESATE	0.9988	0.9422	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	AVMLQMQESATET	0.9366	0.9613	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	AVMLQMQESATET	0.9785	0.9735	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	AVMLQMQESATET	0.9979	0.9371	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	VMLQMQESATETI	0.919	0.9646	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	VMLQMQESATETI	0.9738	0.9752	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	VMLQMQESATETI	0.9992	0.9165	A3SS	patient1
patient1_A3SS_36	HLA-B08:01	MLQMQESATETIS	0.95	0.9627	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	MLQMQESATETIS	0.9645	0.9843	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	MLQMQESATETIS	0.9994	0.9314	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	LQQMQESATETISN	0.969	0.9873	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QQMQESATETISNS	0.9747	0.9882	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QQMQESATETISNS	0.9992	0.9368	A3SS	patient1
patient1_A3SS_36	HLA-B58:01	QMQUESATETISNSS	0.9492	0.9885	A3SS	patient1
patient1_A3SS_36	HLA-B15:01	QMQUESATETISNSS	0.9978	0.942	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	RAALEKNMM	0.9529	0.9684	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	EKNMMQESA	0.9831	0.9223	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	FRAALEKNMM	0.9995	0.9161	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	FRAALEKNMM	0.9889	0.9071	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	FRAALEKNMM	0.949	0.9302	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	RAALEKNMMQ	0.9722	0.9208	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	RAALEKNMMQ	0.9513	0.9353	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	AALEKNMMQE	0.9859	0.9424	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	AALEKNMMQE	0.9411	0.9331	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	ALEKNMMQES	0.9408	0.9303	A3SS	patient1

patient1_A3SS_37	HLA-B27:05	LEKNMMQESA	0.9571	0.904	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	LEKNMMQESA	0.913	0.9212	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	KNMMQESATE	0.9814	0.9003	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	KNMMQESATE	0.9753	0.9244	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	FRAALEKNMMQ	0.9993	0.9207	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	FRAALEKNMMQ	0.9876	0.9196	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	FRAALEKNMMQ	0.9589	0.9078	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	FRAALEKNMMQ	0.9979	0.9269	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	RAALEKNMMQE	0.9575	0.9862	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	RAALEKNMMQE	0.9977	0.9484	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	AALEKNMMQES	0.9313	0.9756	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	AALEKNMMQES	0.9937	0.9137	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	ALEKNMMQESA	0.9782	0.9099	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	ALEKNMMQESA	0.972	0.9294	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	LEKNMMQESAT	0.9934	0.9379	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	EKNMMQESATE	0.9796	0.9496	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	EKNMMQESATE	0.9993	0.9169	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	KNMMQESATET	0.9644	0.9671	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	KNMMQESATET	0.9963	0.9381	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	FRAALEKNMMQE	0.9997	0.9397	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	FRAALEKNMMQE	0.9989	0.9443	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	FRAALEKNMMQE	0.9932	0.9451	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	FRAALEKNMMQE	0.9997	0.9465	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	RAALEKNMMQES	0.9037	0.9406	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	RAALEKNMMQES	0.9934	0.9862	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	RAALEKNMMQES	0.9994	0.9371	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	AALEKNMMQESA	0.9932	0.982	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	AALEKNMMQESA	0.9986	0.9348	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	ALEKNMMQESAT	0.9183	0.9323	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	ALEKNMMQESAT	0.9976	0.9093	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	ALEKNMMQESAT	0.9592	0.9699	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	ALEKNMMQESAT	0.9984	0.9579	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	LEKNMMQESATE	0.9978	0.912	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	LEKNMMQESATE	0.9909	0.9715	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	LEKNMMQESATE	0.997	0.9222	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	LEKNMMQESATE	0.9998	0.949	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	EKNMMQESATET	0.9973	0.9576	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	EKNMMQESATET	0.9968	0.9166	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	EKNMMQESATET	0.9993	0.9214	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	KNMMQESATETI	0.9628	0.9626	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	KNMMQESATETI	0.9946	0.9394	A3SS	patient1

patient1_A3SS_37	HLA-B15:01	KNMMQESATETI	0.9982	0.9447	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	NMMQESATETIS	0.9732	0.9444	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	NMMQESATETIS	0.9645	0.9594	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	NMMQESATETIS	0.9988	0.9142	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	NFRAALEKNMMQE	0.999	0.9098	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	NFRAALEKNMMQE	0.946	0.935	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	FRAALEKNMMQES	0.9987	0.9586	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	FRAALEKNMMQES	0.991	0.9554	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	FRAALEKNMMQES	0.9992	0.9391	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	RAALEKNMMQESA	0.9524	0.9474	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	RAALEKNMMQESA	0.9969	0.9834	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	RAALEKNMMQESA	0.9996	0.9327	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	AALEKNMMQESAT	0.9902	0.9258	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	AALEKNMMQESAT	0.9241	0.9819	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	AALEKNMMQESAT	0.9967	0.9921	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	AALEKNMMQESAT	0.9994	0.9651	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	ALEKNMMQESATE	0.9994	0.9007	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	ALEKNMMQESATE	0.9882	0.9684	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	ALEKNMMQESATE	0.9998	0.9523	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	LEKNMMQESATET	0.996	0.9053	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	LEKNMMQESATET	0.9994	0.9004	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	LEKNMMQESATET	0.9879	0.9774	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	LEKNMMQESATET	0.9964	0.9541	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	LEKNMMQESATET	0.9996	0.9622	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	EKNMMQESATETI	0.9983	0.96	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	EKNMMQESATETI	0.9959	0.9054	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	EKNMMQESATETI	0.995	0.9252	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	KNMMQESATETIS	0.9735	0.9627	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	KNMMQESATETIS	0.9984	0.9737	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	KNMMQESATETIS	0.9998	0.9645	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	NMMQESATETISN	0.9834	0.9576	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	NMMQESATETISN	0.9149	0.9714	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	NMMQESATETISN	0.9884	0.9545	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	NMMQESATETISN	0.9998	0.9229	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	GLENFRAALEKNMM	0.9974	0.9177	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	LENFRAALEKNMMQ	0.9906	0.9074	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	LENFRAALEKNMMQ	0.9582	0.9478	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	ENFRAALEKNMMQE	0.9547	0.9339	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	ENFRAALEKNMMQE	0.9986	0.9115	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	FRAALEKNMMQESA	0.9951	0.9854	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	FRAALEKNMMQESA	0.9684	0.983	A3SS	patient1

patient1_A3SS_37	HLA-B15:01	FRAALEKNMMQESA	0.9919	0.9439	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	RAALEKNMMQESAT	0.9877	0.9836	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	RAALEKNMMQESAT	0.9869	0.9284	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	AALEKNMMQESATE	0.9877	0.9849	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	AALEKNMMQESATE	0.9984	0.9598	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	ALEKNMMQESATET	0.9051	0.9127	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	ALEKNMMQESATET	0.9494	0.9848	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	ALEKNMMQESATET	0.998	0.9671	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	LEKNMMQESATETI	0.9526	0.9191	A3SS	patient1
patient1_A3SS_37	HLA-B27:05	LEKNMMQESATETI	0.9972	0.9103	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	LEKNMMQESATETI	0.9785	0.9634	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	LEKNMMQESATETI	0.9983	0.9654	A3SS	patient1
patient1_A3SS_37	HLA-B39:01	EKNMMQESATETIS	0.958	0.9799	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	EKNMMQESATETIS	0.9435	0.9574	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	EKNMMQESATETIS	0.9913	0.9445	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	KNMMQESATETISN	0.9925	0.9766	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	KNMMQESATETISN	0.9988	0.9706	A3SS	patient1
patient1_A3SS_37	HLA-B08:01	NMMQESATETISNS	0.9453	0.9626	A3SS	patient1
patient1_A3SS_37	HLA-B58:01	NMMQESATETISNS	0.9657	0.9768	A3SS	patient1
patient1_A3SS_37	HLA-B15:01	NMMQESATETISNS	0.9987	0.9624	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	FRAALEKNMQ	0.9966	0.9174	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	FRAALEKNMQ	0.9604	0.9145	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	FRAALEKNMQ	0.979	0.9243	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	RAALEKNMQE	0.9718	0.9426	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	ALEKNMQESA	0.9052	0.9155	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	LEKNMQESAT	0.9212	0.9131	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	EKNMQESATE	0.95	0.9032	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	EKNMQESATE	0.9626	0.9204	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	FRAALEKNMQE	0.9988	0.9359	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	FRAALEKNMQE	0.9929	0.9356	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	FRAALEKNMQE	0.9795	0.9457	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	FRAALEKNMQE	0.9992	0.9353	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	RAALEKNMQES	0.9397	0.9827	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	RAALEKNMQES	0.9945	0.9246	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	AALEKNMQESA	0.9386	0.9822	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	AALEKNMQESA	0.983	0.9068	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	ALEKNMQESAT	0.9889	0.9162	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	ALEKNMQESAT	0.9929	0.9265	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	LEKNMQESATE	0.9951	0.9245	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	LEKNMQESATE	0.9583	0.9704	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	LEKNMQESATE	0.9956	0.9157	A3SS	patient1

patient1_A3SS_39	HLA-B15:01	LEKNMQESATE	0.9995	0.9372	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	EKNMQESATET	0.9938	0.9574	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	EKNMQESATET	0.9892	0.9205	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	EKNMQESATET	0.9988	0.9189	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	KNMQESATETI	0.9393	0.9258	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	KNMQESATETI	0.9887	0.9209	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	NFRAALEKNMQE	0.9976	0.9104	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	NFRAALEKNMQE	0.9113	0.9237	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	FRAALEKNMQES	0.9997	0.9045	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	FRAALEKNMQES	0.9984	0.9512	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	FRAALEKNMQES	0.9934	0.9337	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	FRAALEKNMQES	0.9996	0.9318	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	RAALEKNMQESA	0.9489	0.9176	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	RAALEKNMQESA	0.9954	0.9785	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	RAALEKNMQESA	0.999	0.9086	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	AALEKNMQESAT	0.9239	0.9719	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	AALEKNMQESAT	0.9947	0.9851	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	AALEKNMQESAT	0.9987	0.9398	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	ALEKNMQESATE	0.9994	0.9244	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	ALEKNMQESATE	0.9013	0.9726	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	ALEKNMQESATE	0.9852	0.9637	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	ALEKNMQESATE	0.9999	0.9349	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	LEKNMQESATET	0.9988	0.9064	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	LEKNMQESATET	0.9829	0.9742	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	LEKNMQESATET	0.998	0.9365	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	LEKNMQESATET	0.9998	0.9464	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	EKNMQESATETI	0.9994	0.9458	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	EKNMQESATETI	0.9955	0.9011	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	EKNMQESATETI	0.9976	0.9233	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	KNMQESATETIS	0.9858	0.9568	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	KNMQESATETIS	0.9967	0.9583	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	KNMQESATETIS	0.999	0.9429	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	LENFRAALEKNMQ	0.9917	0.9349	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	NFRAALEKNMQES	0.9408	0.9346	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	FRAALEKNMQESA	0.9992	0.977	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	FRAALEKNMQESA	0.9969	0.9748	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	FRAALEKNMQESA	0.9995	0.9263	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	RAALEKNMQESAT	0.9661	0.9545	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	RAALEKNMQESAT	0.997	0.9826	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	RAALEKNMQESAT	0.9996	0.9242	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	AALEKNMQESATE	0.9548	0.9603	A3SS	patient1

patient1_A3SS_39	HLA-B58:01	AALEKNMQESATE	0.9974	0.9848	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	AALEKNMQESATE	0.9996	0.9456	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	ALEKNMQESATET	0.9913	0.98	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	ALEKNMQESATET	0.9998	0.9509	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	LEKNMQESATETI	0.9994	0.9188	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	LEKNMQESATETI	0.9838	0.9796	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	LEKNMQESATETI	0.9983	0.9505	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	LEKNMQESATETI	0.9996	0.9532	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	EKNMQESATETIS	0.9974	0.97	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	EKNMQESATETIS	0.9939	0.9345	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	EKNMQESATETIS	0.9991	0.9327	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	KNMQESATETISN	0.9851	0.9635	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	KNMQESATETISN	0.9985	0.9575	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	KNMQESATETISN	0.9998	0.9535	A3SS	patient1
patient1_A3SS_39	HLA-B08:01	NMQESATETISNS	0.984	0.9099	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	NMQESATETISNS	0.955	0.9715	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	NMQESATETISNS	0.994	0.9487	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	NMQESATETISNS	0.9999	0.9222	A3SS	patient1
patient1_A3SS_39	HLA-B08:01	GLENFRAALEKNMQ	0.9849	0.9415	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	GLENFRAALEKNMQ	0.9991	0.9178	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	GLENFRAALEKNMQ	0.9891	0.9514	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	GLENFRAALEKNMQ	0.9995	0.9529	A3SS	patient1
patient1_A3SS_39	HLA-B08:01	LENFRAALEKNMQE	0.9708	0.9042	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	LENFRAALEKNMQE	0.9949	0.9025	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	LENFRAALEKNMQE	0.9825	0.9341	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	LENFRAALEKNMQE	0.9975	0.9173	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	ENFRAALEKNMQES	0.9662	0.9448	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	NFRAALEKNMQESA	0.9634	0.9319	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	NFRAALEKNMQESA	0.9912	0.9031	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	FRAALEKNMQESAT	0.9844	0.9809	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	FRAALEKNMQESAT	0.9145	0.9803	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	FRAALEKNMQESAT	0.9933	0.9349	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	RAALEKNMQESATE	0.9914	0.9746	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	RAALEKNMQESATE	0.9974	0.9197	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	AALEKNMQESATET	0.9866	0.9863	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	AALEKNMQESATET	0.9964	0.9581	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	ALEKNMQESATETI	0.9961	0.9048	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	ALEKNMQESATETI	0.9495	0.9842	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	ALEKNMQESATETI	0.9974	0.9539	A3SS	patient1
patient1_A3SS_39	HLA-B27:05	LEKNMQESATETIS	0.99	0.9131	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	LEKNMQESATETIS	0.9569	0.9777	A3SS	patient1

patient1_A3SS_39	HLA-B15:01	LEKNMQESATETIS	0.9982	0.9524	A3SS	patient1
patient1_A3SS_39	HLA-B39:01	EKNMQESATETISN	0.9312	0.9737	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	EKNMQESATETISN	0.9785	0.9333	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	KNMQESATETISNS	0.9888	0.9762	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	KNMQESATETISNS	0.9947	0.9621	A3SS	patient1
patient1_A3SS_39	HLA-B58:01	NMQESATETISNSS	0.9603	0.9661	A3SS	patient1
patient1_A3SS_39	HLA-B15:01	NMQESATETISNSS	0.9988	0.9452	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	VNVLDQCPGG	0.9304	0.9183	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	SYVNVLDQCPG	0.9144	0.9442	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	YVNVLDQCPGG	0.9221	0.9413	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	YVNVLDQCPGG	0.9934	0.9186	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	VNVLDQCPGGQ	0.939	0.9269	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	VLDQCPGGQVP	0.9133	0.9537	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	LDQCPGGQVPA	0.9207	0.9786	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	LDQCPGGQVPA	0.9971	0.9258	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	WTPYSYVNVLDQ	0.9111	0.9569	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	TPYSYVNVLDQC	0.9807	0.9287	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	PYSYVNVLDQCP	0.971	0.9436	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	PYSYVNVLDQCP	0.9932	0.9085	A3SS	patient1
patient1_A3SS_40	HLA-B27:05	YSYVNVLDQCPG	0.9996	0.9132	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	YSYVNVLDQCPG	0.9968	0.9641	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	YSYVNVLDQCPG	0.9973	0.9353	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	SYVNVLDQCPGG	0.9902	0.9477	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	SYVNVLDQCPGG	0.9952	0.9111	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	YVNVLDQCPGGQ	0.9679	0.9388	A3SS	patient1
patient1_A3SS_40	HLA-A26:01	YVNVLDQCPGGQ	0.9089	0.9274	A3SS	patient1
patient1_A3SS_40	HLA-B39:01	YVNVLDQCPGGQ	0.9083	0.9508	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	YVNVLDQCPGGQ	0.981	0.9338	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	VNVLDQCPGGQV	0.9649	0.9331	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	VNVLDQCPGGQV	0.9849	0.9071	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	NVLDQCPGGQVP	0.9757	0.9482	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	NVLDQCPGGQVP	0.986	0.9183	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	VLDQCPGGQVPA	0.9594	0.9358	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	VLDQCPGGQVPA	0.9638	0.9736	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	VLDQCPGGQVPA	0.9979	0.9336	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	LDQCPGGQVPAR	0.9944	0.9494	A3SS	patient1
patient1_A3SS_40	HLA-A26:01	LDQCPGGQVPAR	0.942	0.9631	A3SS	patient1
patient1_A3SS_40	HLA-B39:01	LDQCPGGQVPAR	0.9825	0.975	A3SS	patient1
patient1_A3SS_40	HLA-B40:01	LDQCPGGQVPAR	0.9907	0.9571	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	LDQCPGGQVPAR	0.9767	0.9775	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	LDQCPGGQVPAR	0.9988	0.9434	A3SS	patient1

patient1_A3SS_40	HLA-B58:01	GWTPYSYVNVLDQ	0.987	0.9769	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	GWTPYSYVNVLDQ	0.9935	0.9114	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	WTPYSYVNVLDQC	0.9887	0.972	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	WTPYSYVNVLDQC	0.997	0.9295	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	TPYSYVNVLDQCP	0.9803	0.9742	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	PYSYVNVLDQCPG	0.9923	0.9419	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	YSYVNVLDQCPGG	0.9975	0.9539	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	YSYVNVLDQCPGG	0.9988	0.9174	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	SYVNVLDQCPGGQ	0.9847	0.9032	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	YVNVLDQCPGGQV	0.973	0.9448	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	YVNVLDQCPGGQV	0.9789	0.9421	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	VNVLDQCPGGQVP	0.9914	0.9473	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	NVLDQCPGGQVPA	0.9856	0.9679	A3SS	patient1
patient1_A3SS_40	HLA-B40:01	NVLDQCPGGQVPA	0.9262	0.9188	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	NVLDQCPGGQVPA	0.98	0.9641	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	NVLDQCPGGQVPA	0.9992	0.9248	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	VLDQCPGGQVPAR	0.9974	0.9642	A3SS	patient1
patient1_A3SS_40	HLA-A26:01	VLDQCPGGQVPAR	0.9562	0.9677	A3SS	patient1
patient1_A3SS_40	HLA-B39:01	VLDQCPGGQVPAR	0.9474	0.9803	A3SS	patient1
patient1_A3SS_40	HLA-B40:01	VLDQCPGGQVPAR	0.9777	0.9526	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	VLDQCPGGQVPAR	0.9891	0.9731	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	VLDQCPGGQVPAR	0.999	0.9553	A3SS	patient1
patient1_A3SS_40	HLA-B40:01	LDQCPGGQVPARG	0.9531	0.934	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	LDQCPGGQVPARG	0.995	0.9392	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	AGWTPYSYVNVLDQ	0.9656	0.9905	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	AGWTPYSYVNVLDQ	0.99	0.945	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	GWTPYSYVNVLDQC	0.9826	0.9775	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	WTPYSYVNVLDQCP	0.9464	0.972	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	WTPYSYVNVLDQCP	0.9433	0.9503	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	PYSYVNVLDQCPGG	0.9232	0.932	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	YSYVNVLDQCPGGQ	0.9894	0.948	A3SS	patient1
patient1_A3SS_40	HLA-B15:01	YSYVNVLDQCPGGQ	0.9979	0.9125	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	SYVNVLDQCPGGQV	0.9987	0.9011	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	SYVNVLDQCPGGQV	0.9579	0.9242	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	YVNVLDQCPGGQVP	0.9304	0.9497	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	VNVLDQCPGGQVPA	0.9816	0.9444	A3SS	patient1
patient1_A3SS_40	HLA-A24:02	NVLDQCPGGQVPAR	0.9939	0.977	A3SS	patient1
patient1_A3SS_40	HLA-A26:01	NVLDQCPGGQVPAR	0.908	0.962	A3SS	patient1
patient1_A3SS_40	HLA-B58:01	NVLDQCPGGQVPAR	0.9779	0.9459	A3SS	patient1
patient1_A5SS_1	HLA-B15:01	FLQVAGSPH	0.9828	0.9375	A5SS	patient1
patient1_A5SS_1	HLA-B15:01	FLQVAGSPHS	0.963	0.9361	A5SS	patient1

patient1_A5SS_1	HLA-B15:01	GFLQVAGSPHS	0.98	0.9236	A5SS	patient1
patient1_A5SS_1	HLA-B15:01	FLQVAGSPHSC	0.9959	0.92	A5SS	patient1
patient1_A5SS_1	HLA-A24:02	TKTPAVGFLQVA	0.987	0.9438	A5SS	patient1
patient1_A5SS_1	HLA-B39:01	TKTPAVGFLQVA	0.9837	0.9762	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	TKTPAVGFLQVA	0.9854	0.9738	A5SS	patient1
patient1_A5SS_1	HLA-B15:01	TKTPAVGFLQVA	0.9976	0.9092	A5SS	patient1
patient1_A5SS_1	HLA-A24:02	KTPAVGFLQVAG	0.9796	0.906	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	KTPAVGFLQVAG	0.9393	0.9688	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	VGFLQVAGSPHS	0.9792	0.9303	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	GFLQVAGSPHSC	0.9858	0.9448	A5SS	patient1
patient1_A5SS_1	HLA-A24:02	CTKTPAVGFLQVA	0.9875	0.965	A5SS	patient1
patient1_A5SS_1	HLA-B08:01	CTKTPAVGFLQVA	0.9613	0.946	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	CTKTPAVGFLQVA	0.9898	0.9632	A5SS	patient1
patient1_A5SS_1	HLA-B15:01	CTKTPAVGFLQVA	0.9988	0.938	A5SS	patient1
patient1_A5SS_1	HLA-A24:02	TKTPAVGFLQVAG	0.9913	0.9234	A5SS	patient1
patient1_A5SS_1	HLA-B39:01	TKTPAVGFLQVAG	0.9805	0.9195	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	TKTPAVGFLQVAG	0.9938	0.9117	A5SS	patient1
patient1_A5SS_1	HLA-B39:01	GFLQVAGSPHSCQ	0.912	0.9036	A5SS	patient1
patient1_A5SS_1	HLA-A24:02	CCTKTPAVGFLQVA	0.9594	0.9721	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	CCTKTPAVGFLQVA	0.939	0.9632	A5SS	patient1
patient1_A5SS_1	HLA-A24:02	CTKTPAVGFLQVAG	0.9753	0.936	A5SS	patient1
patient1_A5SS_1	HLA-B58:01	CTKTPAVGFLQVAG	0.9656	0.906	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	RVDPKALVKEE	0.9626	0.9137	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	AEDGKEASARVD	0.9468	0.9214	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	AEDGKEASARVD	0.9991	0.9295	A5SS	patient1
patient1_A5SS_5	HLA-B15:01	AEDGKEASARVD	0.9999	0.9086	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	EDGKEASARVDP	0.9986	0.9034	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	EDGKEASARVDP	0.9583	0.9064	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	ARVDPKALVKEE	0.9986	0.9105	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	PAEDGKEASARVD	0.9993	0.9018	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	PAEDGKEASARVD	0.9961	0.9214	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	PAEDGKEASARVD	0.9878	0.9416	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	PAEDGKEASARVD	0.9987	0.9248	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	AEDGKEASARVDP	0.9994	0.9216	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	AEDGKEASARVDP	0.9969	0.9462	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	AEDGKEASARVDP	0.9992	0.9036	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	EDGKEASARVDPK	0.998	0.9107	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	EDGKEASARVDPK	0.9419	0.9205	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	GKEASARVDPKAL	0.9987	0.9189	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	GKEASARVDPKAL	0.9989	0.9112	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	KEASARVDPKALV	0.9869	0.9421	A5SS	patient1

patient1_A5SS_5	HLA-A24:02	DPAEDGKEASARVD	0.9865	0.9591	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	DPAEDGKEASARVD	0.9496	0.9454	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	DPAEDGKEASARVD	0.9863	0.9159	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	PAEDGKEASARVDP	0.99	0.9503	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	PAEDGKEASARVDP	0.9504	0.9317	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	AEDGKEASARVDPK	0.9931	0.9507	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	AEDGKEASARVDPK	0.98	0.9439	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	AEDGKEASARVDPK	0.9438	0.9603	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	AEDGKEASARVDPK	0.9962	0.9185	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	EDGKEASARVDPKA	0.9979	0.9424	A5SS	patient1
patient1_A5SS_5	HLA-A26:01	EDGKEASARVDPKA	0.9958	0.9652	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	EDGKEASARVDPKA	0.9579	0.9199	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	DGKEASARVDPKAL	0.9981	0.9052	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	DGKEASARVDPKAL	0.9665	0.9564	A5SS	patient1
patient1_A5SS_5	HLA-B40:01	DGKEASARVDPKAL	0.985	0.9204	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	DGKEASARVDPKAL	0.9946	0.9307	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	GKEASARVDPKALV	0.9947	0.9312	A5SS	patient1
patient1_A5SS_5	HLA-B39:01	GKEASARVDPKALV	0.9387	0.9324	A5SS	patient1
patient1_A5SS_5	HLA-B40:01	GKEASARVDPKALV	0.9846	0.9497	A5SS	patient1
patient1_A5SS_5	HLA-B58:01	GKEASARVDPKALV	0.9979	0.9011	A5SS	patient1
patient1_A5SS_5	HLA-A24:02	EASARVDPKALVKE	0.9835	0.9009	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	DMKEIHTYME	0.9091	0.9265	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	MKEIHTYMEM	0.9269	0.9053	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	DMKEIHTYMEM	0.9872	0.9322	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	YMEMFQRAQAL	0.9445	0.9638	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	YMEMFQRAQAL	0.9704	0.9145	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	KLDMKEIHTYME	0.9993	0.9243	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	LDMKEIHTYMEM	0.9666	0.9345	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	LDMKEIHTYMEM	0.9994	0.9098	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	DMKEIHTYMEMF	0.9981	0.934	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	MKEIHTYMEMFQ	0.9229	0.9374	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	MKEIHTYMEMFQ	0.9797	0.9208	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	IHTYMEMFQRAQ	0.9934	0.9544	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	IHTYMEMFQRAQ	0.9968	0.9316	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	HTYMEMFQRAQA	0.9095	0.925	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	HTYMEMFQRAQA	0.9687	0.9311	A5SS	patient1
patient1_A5SS_7	HLA-B27:05	TYMEMFQRAQAL	0.9957	0.9112	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	TYMEMFQRAQAL	0.9639	0.9832	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	TYMEMFQRAQAL	0.9208	0.9498	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	TYMEMFQRAQAL	0.9677	0.948	A5SS	patient1
patient1_A5SS_7	HLA-B08:01	YMEMFQRAQALR	0.9143	0.9103	A5SS	patient1

patient1_A5SS_7	HLA-B15:01	YMEMFQRAQALR	0.9273	0.9416	A5SS	patient1
patient1_A5SS_7	HLA-B27:05	KLDMKEIHTYMEM	0.9996	0.9004	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	KLDMKEIHTYMEM	0.9999	0.9459	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	LDMKEIHTYMEMF	0.9635	0.9491	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	LDMKEIHTYMEMF	0.9997	0.9075	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	DMKEIHTYMEMFQ	0.9962	0.9479	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	MKEIHTYMEMFQR	0.9756	0.9486	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	MKEIHTYMEMFQR	0.9751	0.9163	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	KEIHTYMEMFQRA	0.9392	0.918	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	IHTYMEMFQRAQA	0.9994	0.9778	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	IHTYMEMFQRAQA	0.9693	0.9339	A5SS	patient1
patient1_A5SS_7	HLA-B08:01	HTYMEMFQRAQAL	0.9989	0.9375	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	HTYMEMFQRAQAL	0.9858	0.989	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	HTYMEMFQRAQAL	0.9937	0.9157	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	HTYMEMFQRAQAL	0.9995	0.9301	A5SS	patient1
patient1_A5SS_7	HLA-B08:01	TYMEMFQRAQALR	0.9759	0.9417	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	TYMEMFQRAQALR	0.97	0.953	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	TYMEMFQRAQALR	0.9904	0.9551	A5SS	patient1
patient1_A5SS_7	HLA-B08:01	YMEMFQRAQALRR	0.9558	0.9511	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	YMEMFQRAQALRR	0.969	0.9553	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	GKLDMKEIHTYMEM	0.9943	0.9236	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	GKLDMKEIHTYMEM	0.9841	0.9133	A5SS	patient1
patient1_A5SS_7	HLA-B27:05	KLDMKEIHTYMEMF	0.9989	0.9062	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	KLDMKEIHTYMEMF	0.9883	0.9007	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	KLDMKEIHTYMEMF	0.9997	0.9418	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	LDMKEIHTYMEMFQ	0.9787	0.9285	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	LDMKEIHTYMEMFQ	0.9961	0.9304	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	DMKEIHTYMEMFQR	0.984	0.9469	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	MKEIHTYMEMFQRA	0.9675	0.9792	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	MKEIHTYMEMFQRA	0.9955	0.9099	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	MKEIHTYMEMFQRA	0.99	0.9343	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	KEIHTYMEMFQRAQ	0.9452	0.9432	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	KEIHTYMEMFQRAQ	0.9986	0.9145	A5SS	patient1
patient1_A5SS_7	HLA-B39:01	IHTYMEMFQRAQAL	0.9995	0.986	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	IHTYMEMFQRAQAL	0.9945	0.9324	A5SS	patient1
patient1_A5SS_7	HLA-A24:02	HTYMEMFQRAQALR	0.994	0.9229	A5SS	patient1
patient1_A5SS_7	HLA-B08:01	HTYMEMFQRAQALR	0.9742	0.9677	A5SS	patient1
patient1_A5SS_7	HLA-B58:01	HTYMEMFQRAQALR	0.976	0.9227	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	HTYMEMFQRAQALR	0.9884	0.9438	A5SS	patient1
patient1_A5SS_7	HLA-A24:02	TYMEMFQRAQALRR	0.9971	0.9218	A5SS	patient1
patient1_A5SS_7	HLA-B08:01	TYMEMFQRAQALRR	0.9608	0.963	A5SS	patient1

patient1_A5SS_7	HLA-B58:01	TYMEMFQRAQALRR	0.9657	0.9711	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	TYMEMFQRAQALRR	0.9672	0.9532	A5SS	patient1
patient1_A5SS_7	HLA-B08:01	YMEMFQRAQALRRR	0.9364	0.9653	A5SS	patient1
patient1_A5SS_7	HLA-B15:01	YMEMFQRAQALRRR	0.9752	0.9511	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LQPPPPRNL	0.9797	0.9812	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	SLQPPPPRNL	0.9818	0.9588	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	SLQPPPPRNL	0.9713	0.98	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	LQPPPPRNL	0.9868	0.9186	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LQPPPPRNL	0.948	0.9846	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	LGSLQPPPPRN	0.9046	0.9385	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	LGSLQPPPPRN	0.9986	0.9179	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LGSLQPPPPRN	0.9932	0.9555	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	GSLQPPPPRNL	0.999	0.945	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	GSLQPPPPRNL	0.9943	0.9767	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	GSLQPPPPRNL	0.983	0.9348	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	SLQPPPPRNL	0.9978	0.9418	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	SLQPPPPRNL	0.9836	0.9848	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	QPPPPRNLPHQ	0.9123	0.912	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	QPPPPRNLPHQ	0.9889	0.9009	A5SS	patient1
patient1_A5SS_9	HLA-B39:01	PRNLPHQTQIP	0.9121	0.9519	A5SS	patient1
patient1_A5SS_9	HLA-A02:01	DLGSLQPPPPRN	0.9112	0.9201	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	DLGSLQPPPPRN	0.9875	0.9566	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	DLGSLQPPPPRN	0.9681	0.9534	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	DLGSLQPPPPRN	0.9991	0.9312	A5SS	patient1
patient1_A5SS_9	HLA-B40:01	DLGSLQPPPPRN	0.9231	0.9813	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	DLGSLQPPPPRN	0.9946	0.9962	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	DLGSLQPPPPRN	0.9973	0.9904	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	LGSLQPPPPRNL	0.9996	0.954	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	LGSLQPPPPRNL	0.9898	0.9659	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LGSLQPPPPRNL	0.9866	0.9215	A5SS	patient1
patient1_A5SS_9	HLA-B40:01	GSLQPPPPRNL	0.9392	0.9273	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	GSLQPPPPRNL	0.9849	0.9926	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	GSLQPPPPRNL	0.9956	0.9724	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	SLQPPPPRNLPH	0.9125	0.9875	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	SLQPPPPRNLPH	0.9971	0.9696	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	LQPPPPRNLPHQ	0.9471	0.9495	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LQPPPPRNLPHQ	0.9975	0.9291	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	QPPPPRNLPHQT	0.9724	0.9175	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	QPPPPRNLPHQT	0.9796	0.9275	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	PPPPRNLPHQTQ	0.9628	0.9075	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	SDLGSLQPPPPRN	0.9978	0.9595	A5SS	patient1

patient1_A5SS_9	HLA-A26:01	SDLGSLQPPPPRN	0.9793	0.9106	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	SDLGSLQPPPPRN	0.9726	0.9759	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	SDLGSLQPPPPRN	0.9993	0.9173	A5SS	patient1
patient1_A5SS_9	HLA-B40:01	SDLGSLQPPPPRN	0.9595	0.9437	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	SDLGSLQPPPPRN	0.9981	0.9956	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	SDLGSLQPPPPRN	0.9996	0.9903	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	DLGSLQPPPPRN	0.9805	0.9377	A5SS	patient1
patient1_A5SS_9	HLA-B27:05	DLGSLQPPPPRN	0.9987	0.9094	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	DLGSLQPPPPRN	0.9815	0.9942	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	DLGSLQPPPPRN	0.9874	0.9862	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	LGSLQPPPPRNLP	0.9948	0.9587	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	LGSLQPPPPRNLP	0.9863	0.9423	A5SS	patient1
patient1_A5SS_9	HLA-B40:01	LGSLQPPPPRNLP	0.9066	0.9522	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	LGSLQPPPPRNLP	0.9916	0.9937	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LGSLQPPPPRNLP	0.9984	0.9729	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	GSLQPPPPRNLP	0.9891	0.9907	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	GSLQPPPPRNLP	0.9982	0.958	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	SLQPPPPRNLPHQ	0.957	0.9653	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	SLQPPPPRNLPHQ	0.9532	0.9408	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	SLQPPPPRNLPHQ	0.9742	0.9932	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	SLQPPPPRNLPHQ	0.9993	0.9767	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	LQPPPPRNLPHQ	0.9283	0.9523	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	LQPPPPRNLPHQ	0.9188	0.9873	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LQPPPPRNLPHQ	0.9971	0.9377	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	QPPPPRNLPHQ	0.9707	0.9258	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	QPPPPRNLPHQ	0.9217	0.9006	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	PPPPRNLPHQ	0.9814	0.9266	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	PPPPRNLPHQ	0.96	0.9061	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	WSDLGSLQPPPPRN	0.9826	0.9798	A5SS	patient1
patient1_A5SS_9	HLA-A26:01	WSDLGSLQPPPPRN	0.9044	0.9699	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	WSDLGSLQPPPPRN	0.9287	0.983	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	WSDLGSLQPPPPRN	0.9948	0.9966	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	WSDLGSLQPPPPRN	0.9675	0.992	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	SDLGSLQPPPPRN	0.9881	0.961	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	SDLGSLQPPPPRN	0.9096	0.9689	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	SDLGSLQPPPPRN	0.9886	0.9931	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	SDLGSLQPPPPRN	0.9698	0.9853	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	DLGSLQPPPPRNLP	0.9599	0.9781	A5SS	patient1
patient1_A5SS_9	HLA-B08:01	DLGSLQPPPPRNLP	0.9016	0.9743	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	DLGSLQPPPPRNLP	0.9555	0.9962	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	DLGSLQPPPPRNLP	0.9896	0.9898	A5SS	patient1

patient1_A5SS_9	HLA-A24:02	LGSLQPPPPRNLPH	0.9399	0.9617	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	LGSLQPPPPRNLPH	0.9509	0.9918	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LGSLQPPPPRNLPH	0.9956	0.9521	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	GSLQPPPPRNLPHQ	0.9823	0.9493	A5SS	patient1
patient1_A5SS_9	HLA-B58:01	GSLQPPPPRNLPHQ	0.9778	0.9897	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	GSLQPPPPRNLPHQ	0.9967	0.9651	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	SLQPPPPRNLPHQT	0.9174	0.9627	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	SLQPPPPRNLPHQT	0.9936	0.9746	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	LQPPPPRNLPHQTQ	0.9355	0.9532	A5SS	patient1
patient1_A5SS_9	HLA-B15:01	LQPPPPRNLPHQTQ	0.9982	0.9293	A5SS	patient1
patient1_A5SS_9	HLA-A24:02	QPPPPRNLPHQTQI	0.9047	0.9383	A5SS	patient1
patient1_RI_1	HLA-B15:01	IQMGSAKSV	0.9462	0.9315	RI	patient1
patient1_RI_1	HLA-B15:01	IQMGSAKSVP	0.9908	0.9045	RI	patient1
patient1_RI_1	HLA-B08:01	AGILRTPIQMG	0.9018	0.9229	RI	patient1
patient1_RI_1	HLA-B15:01	AGILRTPIQMG	0.9791	0.9551	RI	patient1
patient1_RI_1	HLA-B58:01	PIQMGSAKSVP	0.9702	0.9231	RI	patient1
patient1_RI_1	HLA-B15:01	IQMGSAKSVPV	0.9897	0.9235	RI	patient1
patient1_RI_1	HLA-B15:01	QMGSAKSVPVT	0.9741	0.9397	RI	patient1
patient1_RI_1	HLA-A24:02	SAGILRTPIQMG	0.9294	0.9562	RI	patient1
patient1_RI_1	HLA-B08:01	SAGILRTPIQMG	0.9621	0.9512	RI	patient1
patient1_RI_1	HLA-B58:01	SAGILRTPIQMG	0.966	0.985	RI	patient1
patient1_RI_1	HLA-B15:01	SAGILRTPIQMG	0.9968	0.9672	RI	patient1
patient1_RI_1	HLA-B58:01	AGILRTPIQMGS	0.9519	0.9042	RI	patient1
patient1_RI_1	HLA-B39:01	LRTPIQMGSAKS	0.9871	0.9339	RI	patient1
patient1_RI_1	HLA-B58:01	LRTPIQMGSAKS	0.9825	0.9022	RI	patient1
patient1_RI_1	HLA-B58:01	TPIQMGSAKSVP	0.9942	0.9376	RI	patient1
patient1_RI_1	HLA-B58:01	PIQMGSAKSVPV	0.9146	0.9386	RI	patient1
patient1_RI_1	HLA-B15:01	IQMGSAKSVPVT	0.9988	0.9177	RI	patient1
patient1_RI_1	HLA-B40:01	QMGSAKSVPVTP	0.9016	0.9073	RI	patient1
patient1_RI_1	HLA-B58:01	QMGSAKSVPVTP	0.9518	0.9622	RI	patient1
patient1_RI_1	HLA-A24:02	PSAGILRTPIQMG	0.986	0.9658	RI	patient1
patient1_RI_1	HLA-B08:01	PSAGILRTPIQMG	0.9245	0.9542	RI	patient1
patient1_RI_1	HLA-A24:02	SAGILRTPIQMGS	0.9738	0.9292	RI	patient1
patient1_RI_1	HLA-B08:01	SAGILRTPIQMGS	0.9695	0.9122	RI	patient1
patient1_RI_1	HLA-B58:01	SAGILRTPIQMGS	0.9747	0.9181	RI	patient1
patient1_RI_1	HLA-A24:02	AGILRTPIQMGS	0.9633	0.9509	RI	patient1
patient1_RI_1	HLA-B58:01	AGILRTPIQMGS	0.9539	0.9369	RI	patient1
patient1_RI_1	HLA-A24:02	GILRTPIQMGS	0.9644	0.923	RI	patient1
patient1_RI_1	HLA-B58:01	GILRTPIQMGS	0.9044	0.9445	RI	patient1
patient1_RI_1	HLA-A24:02	ILRTPIQMGS	0.9836	0.9515	RI	patient1
patient1_RI_1	HLA-B58:01	ILRTPIQMGS	0.9377	0.9011	RI	patient1

patient1_RI_1	HLA-B39:01	LRTPIQMGSAKSV	0.9935	0.9271	RI	patient1
patient1_RI_1	HLA-B58:01	LRTPIQMGSAKSV	0.9599	0.9067	RI	patient1
patient1_RI_1	HLA-B08:01	TPIQMGSAKSVPV	0.9965	0.9066	RI	patient1
patient1_RI_1	HLA-B39:01	TPIQMGSAKSVPV	0.9484	0.9331	RI	patient1
patient1_RI_1	HLA-B39:01	IQMGSAKSVPVTP	0.9031	0.9368	RI	patient1
patient1_RI_1	HLA-B40:01	IQMGSAKSVPVTP	0.9582	0.9052	RI	patient1
patient1_RI_1	HLA-B40:01	QMGSAKSVPVTPA	0.9707	0.9393	RI	patient1
patient1_RI_1	HLA-A24:02	SPSAGILRTPIQMG	0.9079	0.9641	RI	patient1
patient1_RI_1	HLA-A24:02	PSAGILRTPIQMGS	0.9095	0.9273	RI	patient1
patient1_RI_1	HLA-A24:02	SAGILRTPIQMGS	0.9727	0.951	RI	patient1
patient1_RI_1	HLA-B08:01	SAGILRTPIQMGS	0.9495	0.9239	RI	patient1
patient1_RI_1	HLA-B58:01	SAGILRTPIQMGS	0.9682	0.9271	RI	patient1
patient1_RI_1	HLA-A24:02	AGILRTPIQMGS	0.9434	0.9567	RI	patient1
patient1_RI_1	HLA-B58:01	AGILRTPIQMGS	0.9449	0.9221	RI	patient1
patient1_RI_1	HLA-A24:02	GILRTPIQMGS	0.9719	0.9594	RI	patient1
patient1_RI_1	HLA-B58:01	GILRTPIQMGS	0.9351	0.9368	RI	patient1
patient1_RI_1	HLA-A24:02	ILRTPIQMGS	0.9522	0.9661	RI	patient1
patient1_RI_4	HLA-B39:01	YKDSIEMWV	0.9851	0.9459	RI	patient1
patient1_RI_4	HLA-B27:05	AKYKDSIEMW	0.9986	0.958	RI	patient1
patient1_RI_4	HLA-B58:01	AKYKDSIEMW	0.9782	0.9349	RI	patient1
patient1_RI_4	HLA-B27:05	KYKDSIEMWV	0.9421	0.9395	RI	patient1
patient1_RI_4	HLA-B39:01	YKDSIEMWVQ	0.9194	0.9412	RI	patient1
patient1_RI_4	HLA-B15:01	YKDSIEMWVQ	0.9102	0.928	RI	patient1
patient1_RI_4	HLA-B15:01	SIEMWVQGHSS	0.9172	0.9371	RI	patient1
patient1_RI_4	HLA-B15:01	IEMWVQGHSS	0.9351	0.9332	RI	patient1
patient1_RI_4	HLA-B27:05	QAKYKDSIEMW	0.9989	0.9046	RI	patient1
patient1_RI_4	HLA-B58:01	QAKYKDSIEMW	0.9981	0.9799	RI	patient1
patient1_RI_4	HLA-B27:05	AKYKDSIEMWV	0.9982	0.967	RI	patient1
patient1_RI_4	HLA-B39:01	AKYKDSIEMWV	0.9009	0.9434	RI	patient1
patient1_RI_4	HLA-B58:01	AKYKDSIEMWV	0.9105	0.9611	RI	patient1
patient1_RI_4	HLA-B15:01	KYKDSIEMWVQ	0.9637	0.9497	RI	patient1
patient1_RI_4	HLA-B39:01	YKDSIEMWVQG	0.9737	0.915	RI	patient1
patient1_RI_4	HLA-B58:01	YKDSIEMWVQG	0.9935	0.9343	RI	patient1
patient1_RI_4	HLA-B15:01	YKDSIEMWVQG	0.9982	0.9025	RI	patient1
patient1_RI_4	HLA-B15:01	DSIEMWVQGHSS	0.9977	0.9766	RI	patient1
patient1_RI_4	HLA-B58:01	SIEMWVQGHSS	0.938	0.9389	RI	patient1
patient1_RI_4	HLA-B15:01	SIEMWVQGHSS	0.9905	0.9576	RI	patient1
patient1_RI_4	HLA-B58:01	VQAKYKDSIEMW	0.9986	0.9573	RI	patient1
patient1_RI_4	HLA-B27:05	QAKYKDSIEMWV	0.9963	0.9321	RI	patient1
patient1_RI_4	HLA-B58:01	QAKYKDSIEMWV	0.9359	0.9896	RI	patient1
patient1_RI_4	HLA-B27:05	AKYKDSIEMWVQ	0.9992	0.945	RI	patient1

patient1_RI_4	HLA-B39:01	AKYKDSIEMWVQ	0.9108	0.9565	RI	patient1
patient1_RI_4	HLA-B58:01	AKYKDSIEMWVQ	0.9947	0.9731	RI	patient1
patient1_RI_4	HLA-B15:01	AKYKDSIEMWVQ	0.9985	0.9569	RI	patient1
patient1_RI_4	HLA-B58:01	KYKDSIEMWVQG	0.994	0.9356	RI	patient1
patient1_RI_4	HLA-B15:01	KYKDSIEMWVQG	0.996	0.9248	RI	patient1
patient1_RI_4	HLA-B39:01	YKDSIEMWVQGH	0.9968	0.9207	RI	patient1
patient1_RI_4	HLA-B58:01	YKDSIEMWVQGH	0.9979	0.9159	RI	patient1
patient1_RI_4	HLA-B15:01	YKDSIEMWVQGH	0.9993	0.9003	RI	patient1
patient1_RI_4	HLA-B39:01	KDSIEMWVQGHS	0.9342	0.9834	RI	patient1
patient1_RI_4	HLA-B58:01	KDSIEMWVQGHS	0.9967	0.9356	RI	patient1
patient1_RI_4	HLA-B15:01	KDSIEMWVQGHS	0.9996	0.96	RI	patient1
patient1_RI_4	HLA-B39:01	DSIEMWVQGHSS	0.9179	0.9898	RI	patient1
patient1_RI_4	HLA-B58:01	DSIEMWVQGHSS	0.996	0.9473	RI	patient1
patient1_RI_4	HLA-B15:01	DSIEMWVQGHSS	0.9995	0.9806	RI	patient1
patient1_RI_4	HLA-A24:02	SIEMWVQGHSSR	0.9809	0.9095	RI	patient1
patient1_RI_4	HLA-B08:01	SIEMWVQGHSSR	0.9355	0.9093	RI	patient1
patient1_RI_4	HLA-B58:01	SIEMWVQGHSSR	0.9708	0.9325	RI	patient1
patient1_RI_4	HLA-B15:01	SIEMWVQGHSSR	0.9695	0.9408	RI	patient1
patient1_RI_4	HLA-B08:01	IEMWVQGHSSRA	0.9927	0.911	RI	patient1
patient1_RI_4	HLA-B39:01	IEMWVQGHSSRA	0.9841	0.984	RI	patient1
patient1_RI_4	HLA-B58:01	IEMWVQGHSSRA	0.9966	0.9494	RI	patient1
patient1_RI_4	HLA-B15:01	IEMWVQGHSSRA	0.9982	0.9214	RI	patient1
patient1_RI_4	HLA-B58:01	EMWVQGHSSRAS	0.9504	0.9602	RI	patient1
patient1_RI_4	HLA-B15:01	EMWVQGHSSRAS	0.9904	0.9341	RI	patient1
patient1_RI_4	HLA-B39:01	TVQAKYKDSIEMW	0.9207	0.9164	RI	patient1
patient1_RI_4	HLA-B58:01	TVQAKYKDSIEMW	0.9987	0.9306	RI	patient1
patient1_RI_4	HLA-B58:01	VQAKYKDSIEMWV	0.9779	0.9857	RI	patient1
patient1_RI_4	HLA-B27:05	QAKYKDSIEMWVQ	0.9991	0.9117	RI	patient1
patient1_RI_4	HLA-B58:01	QAKYKDSIEMWVQ	0.9959	0.9925	RI	patient1
patient1_RI_4	HLA-B15:01	QAKYKDSIEMWVQ	0.9997	0.9177	RI	patient1
patient1_RI_4	HLA-B39:01	AKYKDSIEMWVQG	0.9405	0.9628	RI	patient1
patient1_RI_4	HLA-B58:01	AKYKDSIEMWVQG	0.9967	0.9724	RI	patient1
patient1_RI_4	HLA-B15:01	AKYKDSIEMWVQG	0.9994	0.9306	RI	patient1
patient1_RI_4	HLA-B58:01	KYKDSIEMWVQGH	0.9961	0.942	RI	patient1
patient1_RI_4	HLA-B15:01	KYKDSIEMWVQGH	0.9994	0.9611	RI	patient1
patient1_RI_4	HLA-B39:01	YKDSIEMWVQGH	0.9981	0.981	RI	patient1
patient1_RI_4	HLA-B58:01	YKDSIEMWVQGH	0.9987	0.972	RI	patient1
patient1_RI_4	HLA-B15:01	YKDSIEMWVQGH	0.9999	0.9686	RI	patient1
patient1_RI_4	HLA-B39:01	KDSIEMWVQGHSS	0.9606	0.9882	RI	patient1
patient1_RI_4	HLA-B58:01	KDSIEMWVQGHSS	0.9966	0.9846	RI	patient1
patient1_RI_4	HLA-B15:01	KDSIEMWVQGHSS	0.9996	0.9731	RI	patient1

patient1_RI_4	HLA-B39:01	DSIEMWVQGHSSR	0.9675	0.9914	RI	patient1
patient1_RI_4	HLA-B58:01	DSIEMWVQGHSSR	0.9963	0.9799	RI	patient1
patient1_RI_4	HLA-B15:01	DSIEMWVQGHSSR	0.9978	0.9781	RI	patient1
patient1_RI_4	HLA-A24:02	SIEMWVQGHSSRA	0.9812	0.9199	RI	patient1
patient1_RI_4	HLA-B08:01	SIEMWVQGHSSRA	0.9912	0.9064	RI	patient1
patient1_RI_4	HLA-B39:01	SIEMWVQGHSSRA	0.9277	0.9883	RI	patient1
patient1_RI_4	HLA-B58:01	SIEMWVQGHSSRA	0.9894	0.9493	RI	patient1
patient1_RI_4	HLA-B15:01	SIEMWVQGHSSRA	0.9991	0.9263	RI	patient1
patient1_RI_4	HLA-A24:02	IEMWVQGHSSRAS	0.99	0.9101	RI	patient1
patient1_RI_4	HLA-B08:01	IEMWVQGHSSRAS	0.9914	0.9309	RI	patient1
patient1_RI_4	HLA-B39:01	IEMWVQGHSSRAS	0.9718	0.9788	RI	patient1
patient1_RI_4	HLA-B58:01	IEMWVQGHSSRAS	0.9937	0.9241	RI	patient1
patient1_RI_4	HLA-B15:01	IEMWVQGHSSRAS	0.9994	0.9073	RI	patient1
patient1_RI_4	HLA-B15:01	EMWVQGHSSRASA	0.9829	0.918	RI	patient1
patient1_RI_4	HLA-B58:01	ATVQAKYKDSIEMW	0.9989	0.9607	RI	patient1
patient1_RI_4	HLA-B58:01	TVQAKYKDSIEMWV	0.9889	0.985	RI	patient1
patient1_RI_4	HLA-B58:01	VQAKYKDSIEMWVQ	0.9784	0.9835	RI	patient1
patient1_RI_4	HLA-B15:01	VQAKYKDSIEMWVQ	0.9987	0.9492	RI	patient1
patient1_RI_4	HLA-B27:05	QAKYKDSIEMWVQG	0.9974	0.9074	RI	patient1
patient1_RI_4	HLA-B40:01	QAKYKDSIEMWVQG	0.9442	0.9163	RI	patient1
patient1_RI_4	HLA-B58:01	QAKYKDSIEMWVQG	0.9934	0.9925	RI	patient1
patient1_RI_4	HLA-B15:01	QAKYKDSIEMWVQG	0.9988	0.96	RI	patient1
patient1_RI_4	HLA-B27:05	AKYKDSIEMWVQGH	0.9975	0.9041	RI	patient1
patient1_RI_4	HLA-B58:01	AKYKDSIEMWVQGH	0.9865	0.9798	RI	patient1
patient1_RI_4	HLA-B15:01	AKYKDSIEMWVQGH	0.9924	0.9437	RI	patient1
patient1_RI_4	HLA-B58:01	KYKDSIEMWVQGH	0.9876	0.9804	RI	patient1
patient1_RI_4	HLA-B15:01	KYKDSIEMWVQGH	0.9974	0.9704	RI	patient1
patient1_RI_4	HLA-B39:01	YKDSIEMWVQGHSS	0.9427	0.9814	RI	patient1
patient1_RI_4	HLA-B58:01	YKDSIEMWVQGHSS	0.9813	0.9844	RI	patient1
patient1_RI_4	HLA-B15:01	YKDSIEMWVQGHSS	0.997	0.9678	RI	patient1
patient1_RI_4	HLA-B58:01	KDSIEMWVQGHSSR	0.9955	0.9888	RI	patient1
patient1_RI_4	HLA-B15:01	KDSIEMWVQGHSSR	0.9932	0.9787	RI	patient1
patient1_RI_4	HLA-B58:01	DSIEMWVQGHSSRA	0.9737	0.9756	RI	patient1
patient1_RI_4	HLA-B15:01	DSIEMWVQGHSSRA	0.995	0.941	RI	patient1
patient1_RI_4	HLA-A24:02	SIEMWVQGHSSRAS	0.9603	0.9246	RI	patient1
patient1_RI_4	HLA-A24:02	IEMWVQGHSSRASA	0.9697	0.9026	RI	patient1
patient1_RI_6	HLA-B15:01	RNESAVTGYKMG	0.9991	0.9241	RI	patient1
patient1_RI_6	HLA-B58:01	SAVTGYKMGAT	0.9826	0.9396	RI	patient1
patient1_RI_6	HLA-B15:01	AVTGYKMGAT	0.9386	0.9216	RI	patient1
patient1_RI_6	HLA-B58:01	GYKMGATRRKP	0.9436	0.9566	RI	patient1
patient1_RI_6	HLA-B39:01	FRNESAVTGYKMG	0.99	0.951	RI	patient1

patient1_RI_6	HLA-B58:01	FRNESAVTGYKMG	0.9911	0.9198	RI	patient1
patient1_RI_6	HLA-B15:01	FRNESAVTGYKMG	0.9988	0.962	RI	patient1
patient1_RI_6	HLA-B58:01	RNESAVTGYKMGT	0.9943	0.9033	RI	patient1
patient1_RI_6	HLA-B15:01	RNESAVTGYKMGT	0.9952	0.9216	RI	patient1
patient1_RI_6	HLA-B39:01	NESAVTGYKMGT	0.9446	0.927	RI	patient1
patient1_RI_6	HLA-A26:01	ESAVTGYKMGTAT	0.9855	0.9032	RI	patient1
patient1_RI_6	HLA-A24:02	SAVTGYKMGTATR	0.9835	0.9043	RI	patient1
patient1_RI_6	HLA-B58:01	SAVTGYKMGTATR	0.9683	0.9557	RI	patient1
patient1_RI_6	HLA-B15:01	SAVTGYKMGTATR	0.9927	0.9364	RI	patient1
patient1_RI_6	HLA-A24:02	AVTGYKMGTATRR	0.9698	0.9179	RI	patient1
patient1_RI_6	HLA-B58:01	AVTGYKMGTATRR	0.9607	0.9376	RI	patient1
patient1_RI_6	HLA-B15:01	AVTGYKMGTATRR	0.9481	0.9382	RI	patient1
patient1_RI_6	HLA-B15:01	VTGYKMGTATRRK	0.989	0.9164	RI	patient1
patient1_RI_6	HLA-B58:01	TGYKMGTATRRKP	0.9868	0.9571	RI	patient1
patient1_RI_6	HLA-B15:01	TGYKMGTATRRKP	0.9923	0.9181	RI	patient1
patient1_RI_6	HLA-B58:01	GYKMGTATRRKPH	0.9328	0.9501	RI	patient1
patient1_RI_6	HLA-B58:01	KMGTATRRKPHLL	0.9627	0.9241	RI	patient1
patient1_RI_6	HLA-B15:01	PFRNESAVTGYKMG	0.9706	0.947	RI	patient1
patient1_RI_6	HLA-B15:01	FRNESAVTGYKMGT	0.9679	0.966	RI	patient1
patient1_RI_6	HLA-A24:02	ESAVTGYKMGTATR	0.9882	0.9554	RI	patient1
patient1_RI_6	HLA-A26:01	ESAVTGYKMGTATR	0.9582	0.953	RI	patient1
patient1_RI_6	HLA-B58:01	ESAVTGYKMGTATR	0.9757	0.9264	RI	patient1
patient1_RI_6	HLA-B15:01	ESAVTGYKMGTATR	0.9711	0.9329	RI	patient1
patient1_RI_6	HLA-A24:02	SAVTGYKMGTATRR	0.9442	0.928	RI	patient1
patient1_RI_6	HLA-B58:01	SAVTGYKMGTATRR	0.948	0.9331	RI	patient1
patient1_RI_6	HLA-B15:01	SAVTGYKMGTATRR	0.9339	0.9446	RI	patient1
patient1_RI_6	HLA-A24:02	AVTGYKMGTATRRK	0.9058	0.9271	RI	patient1
patient1_RI_6	HLA-B15:01	AVTGYKMGTATRRK	0.9638	0.9482	RI	patient1
patient1_RI_6	HLA-B58:01	GYKMGTATRRKPHL	0.9166	0.9431	RI	patient1
patient1_RI_6	HLA-B39:01	YKMGTATRRKPHLL	0.9833	0.9105	RI	patient1
patient1_RI_6	HLA-B58:01	YKMGTATRRKPHLL	0.9532	0.9011	RI	patient1
patient1_RI_10	HLA-B58:01	NESAVTGYKMS	0.9642	0.9226	RI	patient1
patient1_RI_10	HLA-B39:01	YKMSRGGARRP	0.9887	0.9088	RI	patient1
patient1_RI_10	HLA-B58:01	RNESAVTGYKMS	0.9931	0.9662	RI	patient1
patient1_RI_10	HLA-B15:01	RNESAVTGYKMS	0.9983	0.9727	RI	patient1
patient1_RI_10	HLA-B27:05	FRNESAVTGYKMS	0.9969	0.9239	RI	patient1
patient1_RI_10	HLA-B39:01	FRNESAVTGYKMS	0.9841	0.9732	RI	patient1
patient1_RI_10	HLA-B58:01	FRNESAVTGYKMS	0.988	0.9536	RI	patient1
patient1_RI_10	HLA-B15:01	FRNESAVTGYKMS	0.999	0.9766	RI	patient1
patient1_RI_10	HLA-B58:01	RNESAVTGYKMSR	0.9942	0.9441	RI	patient1
patient1_RI_10	HLA-B15:01	RNESAVTGYKMSR	0.9657	0.9576	RI	patient1

patient1_RI_10	HLA-A24:02	ESAVTGYKMSRGG	0.9888	0.9201	RI	patient1
patient1_RI_10	HLA-A26:01	ESAVTGYKMSRGG	0.9313	0.9345	RI	patient1
patient1_RI_10	HLA-B58:01	ESAVTGYKMSRGG	0.9769	0.9167	RI	patient1
patient1_RI_10	HLA-B58:01	AVTGYKMSRGGAR	0.9357	0.9138	RI	patient1
patient1_RI_10	HLA-A24:02	TGYKMSRGGARRP	0.9827	0.9308	RI	patient1
patient1_RI_10	HLA-A24:02	GYKMSRGGARRPG	0.9881	0.9327	RI	patient1
patient1_RI_10	HLA-A24:02	YKMSRGGARRPGG	0.9754	0.9295	RI	patient1
patient1_RI_10	HLA-A24:02	KMSRGGARRPGGQ	0.987	0.9225	RI	patient1
patient1_RI_10	HLA-B15:01	PFRNESAVTGYKMS	0.9533	0.9754	RI	patient1
patient1_RI_10	HLA-B27:05	FRNESAVTGYKMSR	0.9917	0.9315	RI	patient1
patient1_RI_10	HLA-B39:01	FRNESAVTGYKMSR	0.9359	0.9759	RI	patient1
patient1_RI_10	HLA-B58:01	FRNESAVTGYKMSR	0.9057	0.963	RI	patient1
patient1_RI_10	HLA-B15:01	FRNESAVTGYKMSR	0.959	0.9829	RI	patient1
patient1_RI_10	HLA-B58:01	RNESAVTGYKMSRG	0.9469	0.9248	RI	patient1
patient1_RI_10	HLA-B15:01	RNESAVTGYKMSRG	0.9714	0.9578	RI	patient1
patient1_RI_10	HLA-A24:02	NESAVTGYKMSRGG	0.9637	0.9223	RI	patient1
patient1_RI_10	HLA-B58:01	NESAVTGYKMSRGG	0.9692	0.9178	RI	patient1
patient1_RI_10	HLA-B15:01	NESAVTGYKMSRGG	0.9828	0.9341	RI	patient1
patient1_RI_10	HLA-A24:02	ESAVTGYKMSRGGGA	0.9731	0.9615	RI	patient1
patient1_RI_10	HLA-B58:01	ESAVTGYKMSRGGGA	0.9723	0.9065	RI	patient1
patient1_RI_10	HLA-A24:02	SAVTGYKMSRGGAR	0.9701	0.9166	RI	patient1
patient1_RI_10	HLA-A24:02	AVTGYKMSRGGARR	0.9248	0.9073	RI	patient1
patient1_RI_10	HLA-A24:02	VTGYKMSRGGARRP	0.9544	0.9339	RI	patient1
patient1_RI_10	HLA-A24:02	TGYKMSRGGARRPG	0.9066	0.9416	RI	patient1
patient1_RI_10	HLA-A24:02	GYKMSRGGARRPGG	0.967	0.9498	RI	patient1
patient1_RI_10	HLA-A24:02	YKMSRGGARRPGGQ	0.9545	0.9627	RI	patient1
patient1_RI_10	HLA-A24:02	KMSRGGARRPGGQC	0.9511	0.938	RI	patient1
patient1_RI_11	HLA-B27:05	NFTLLASLGL	0.9857	0.9063	RI	patient1
patient1_RI_11	HLA-B15:01	TLLASLGLAS	0.9454	0.9487	RI	patient1
patient1_RI_11	HLA-B15:01	LLASLGLASS	0.9717	0.9342	RI	patient1
patient1_RI_11	HLA-B27:05	LASLGLASSK	0.9529	0.9253	RI	patient1
patient1_RI_11	HLA-B15:01	ASLGLASSKT	0.9143	0.9452	RI	patient1
patient1_RI_11	HLA-B15:01	SLGLASSKTH	0.937	0.9147	RI	patient1
patient1_RI_11	HLA-B27:05	LGLASSKTHE	0.9856	0.9255	RI	patient1
patient1_RI_11	HLA-B15:01	LGLASSKTHE	0.9639	0.9649	RI	patient1
patient1_RI_11	HLA-B15:01	TLLASLGLASS	0.9706	0.9285	RI	patient1
patient1_RI_11	HLA-B27:05	LLASLGLASSK	0.9709	0.9085	RI	patient1
patient1_RI_11	HLA-B15:01	LLASLGLASSK	0.9184	0.95	RI	patient1
patient1_RI_11	HLA-B27:05	LASLGLASSKT	0.9951	0.9149	RI	patient1
patient1_RI_11	HLA-B15:01	LASLGLASSKT	0.9885	0.9528	RI	patient1
patient1_RI_11	HLA-B58:01	ASLGLASSKTH	0.9627	0.9301	RI	patient1

patient1_RI_11	HLA-B27:05	SLGLASSKTHE	0.9939	0.9446	RI	patient1
patient1_RI_11	HLA-B15:01	SLGLASSKTHE	0.9952	0.9725	RI	patient1
patient1_RI_11	HLA-B27:05	LGLASSKTHEI	0.9996	0.9102	RI	patient1
patient1_RI_11	HLA-B58:01	LGLASSKTHEI	0.9867	0.9508	RI	patient1
patient1_RI_11	HLA-B15:01	LGLASSKTHEI	0.996	0.9356	RI	patient1
patient1_RI_11	HLA-B39:01	LENFTLLASLGL	0.9535	0.9192	RI	patient1
patient1_RI_11	HLA-B58:01	LENFTLLASLGL	0.9563	0.9342	RI	patient1
patient1_RI_11	HLA-B39:01	ENFTLLASLGLA	0.9189	0.9018	RI	patient1
patient1_RI_11	HLA-B58:01	ENFTLLASLGLA	0.95	0.9078	RI	patient1
patient1_RI_11	HLA-B15:01	NFTLLASLGLAS	0.9736	0.93	RI	patient1
patient1_RI_11	HLA-B15:01	TLLASLGLASSK	0.9724	0.9513	RI	patient1
patient1_RI_11	HLA-B58:01	LLASLGLASSKT	0.9495	0.9726	RI	patient1
patient1_RI_11	HLA-B15:01	LLASLGLASSKT	0.9987	0.9468	RI	patient1
patient1_RI_11	HLA-B58:01	LASLGLASSKTH	0.9902	0.9541	RI	patient1
patient1_RI_11	HLA-B15:01	LASLGLASSKTH	0.9993	0.9174	RI	patient1
patient1_RI_11	HLA-B58:01	ASLGLASSKTHE	0.9965	0.9838	RI	patient1
patient1_RI_11	HLA-B15:01	ASLGLASSKTHE	0.9984	0.9688	RI	patient1
patient1_RI_11	HLA-B27:05	SLGLASSKTHEI	0.999	0.9163	RI	patient1
patient1_RI_11	HLA-B58:01	SLGLASSKTHEI	0.9799	0.9384	RI	patient1
patient1_RI_11	HLA-B15:01	SLGLASSKTHEI	0.9975	0.945	RI	patient1
patient1_RI_11	HLA-B27:05	LGLASSKTHEIT	0.9998	0.9116	RI	patient1
patient1_RI_11	HLA-B58:01	LGLASSKTHEIT	0.9939	0.9645	RI	patient1
patient1_RI_11	HLA-B15:01	LGLASSKTHEIT	0.9992	0.9472	RI	patient1
patient1_RI_11	HLA-B08:01	MLENFTLLASLGL	0.9377	0.9457	RI	patient1
patient1_RI_11	HLA-B58:01	MLENFTLLASLGL	0.9034	0.9537	RI	patient1
patient1_RI_11	HLA-B58:01	LENFTLLASLGLA	0.9209	0.9619	RI	patient1
patient1_RI_11	HLA-B39:01	ENFTLLASLGLAS	0.9438	0.9165	RI	patient1
patient1_RI_11	HLA-B58:01	ENFTLLASLGLAS	0.9555	0.9236	RI	patient1
patient1_RI_11	HLA-B15:01	NFTLLASLGLASS	0.9866	0.9114	RI	patient1
patient1_RI_11	HLA-B15:01	FLLASLGLASSK	0.9911	0.9176	RI	patient1
patient1_RI_11	HLA-B58:01	TLLASLGLASSKT	0.9711	0.9668	RI	patient1
patient1_RI_11	HLA-B15:01	TLLASLGLASSKT	0.999	0.9234	RI	patient1
patient1_RI_11	HLA-B58:01	LLASLGLASSKTH	0.9292	0.9714	RI	patient1
patient1_RI_11	HLA-B15:01	LLASLGLASSKTH	0.9999	0.9214	RI	patient1
patient1_RI_11	HLA-B08:01	LASLGLASSKTHE	0.9942	0.9238	RI	patient1
patient1_RI_11	HLA-B39:01	LASLGLASSKTHE	0.9011	0.9895	RI	patient1
patient1_RI_11	HLA-B58:01	LASLGLASSKTHE	0.996	0.992	RI	patient1
patient1_RI_11	HLA-B15:01	LASLGLASSKTHE	0.9998	0.9743	RI	patient1
patient1_RI_11	HLA-B27:05	ASLGLASSKTHEI	0.9995	0.9059	RI	patient1
patient1_RI_11	HLA-B58:01	ASLGLASSKTHEI	0.9995	0.9689	RI	patient1
patient1_RI_11	HLA-B15:01	ASLGLASSKTHEI	0.999	0.9569	RI	patient1

patient1_RI_11	HLA-B27:05	SLGLASSKTHEIT	0.9991	0.943	RI	patient1
patient1_RI_11	HLA-B58:01	SLGLASSKTHEIT	0.9933	0.9751	RI	patient1
patient1_RI_11	HLA-B15:01	SLGLASSKTHEIT	0.9992	0.9677	RI	patient1
patient1_RI_11	HLA-B39:01	LGLASSKTHEITQ	0.9396	0.9798	RI	patient1
patient1_RI_11	HLA-B58:01	LGLASSKTHEITQ	0.9971	0.987	RI	patient1
patient1_RI_11	HLA-B15:01	LGLASSKTHEITQ	0.9998	0.9492	RI	patient1
patient1_RI_11	HLA-B58:01	VMLNFTLLASLGL	0.9365	0.9461	RI	patient1
patient1_RI_11	HLA-B15:01	VMLNFTLLASLGL	0.9978	0.9029	RI	patient1
patient1_RI_11	HLA-B58:01	MLENFTLLASLGLA	0.9101	0.9689	RI	patient1
patient1_RI_11	HLA-B15:01	MLENFTLLASLGLA	0.9701	0.9247	RI	patient1
patient1_RI_11	HLA-B15:01	LENFTLLASLGLAS	0.9675	0.9049	RI	patient1
patient1_RI_11	HLA-B15:01	ENFTLLASLGLASS	0.974	0.9072	RI	patient1
patient1_RI_11	HLA-B15:01	NFTLLASLGLASSK	0.9631	0.9114	RI	patient1
patient1_RI_11	HLA-A24:02	FTLLASLGLASSKT	0.9715	0.9141	RI	patient1
patient1_RI_11	HLA-B58:01	FTLLASLGLASSKT	0.9495	0.962	RI	patient1
patient1_RI_11	HLA-A24:02	LLASLGLASSKTHE	0.9824	0.9278	RI	patient1
patient1_RI_11	HLA-B58:01	LLASLGLASSKTHE	0.9417	0.9893	RI	patient1
patient1_RI_11	HLA-B15:01	LLASLGLASSKTHE	0.9994	0.9574	RI	patient1
patient1_RI_11	HLA-B08:01	LASLGLASSKTHEI	0.9843	0.9219	RI	patient1
patient1_RI_11	HLA-B58:01	LASLGLASSKTHEI	0.9981	0.9873	RI	patient1
patient1_RI_11	HLA-B15:01	LASLGLASSKTHEI	0.9979	0.963	RI	patient1
patient1_RI_11	HLA-B58:01	ASLGLASSKTHEIT	0.9889	0.9892	RI	patient1
patient1_RI_11	HLA-B15:01	ASLGLASSKTHEIT	0.9942	0.9599	RI	patient1
patient1_RI_11	HLA-A24:02	SLGLASSKTHEITQ	0.9734	0.9238	RI	patient1
patient1_RI_11	HLA-B58:01	SLGLASSKTHEITQ	0.9775	0.9905	RI	patient1
patient1_RI_11	HLA-B15:01	SLGLASSKTHEITQ	0.9987	0.9691	RI	patient1
patient1_RI_11	HLA-B08:01	LGLASSKTHEITQL	0.984	0.9078	RI	patient1
patient1_RI_11	HLA-B58:01	LGLASSKTHEITQL	0.987	0.9857	RI	patient1
patient1_RI_11	HLA-B15:01	LGLASSKTHEITQL	0.9994	0.9398	RI	patient1
patient1_RI_12	HLA-B15:01	LQMAPPAAW	0.9065	0.9833	RI	patient1
patient1_RI_12	HLA-B15:01	YLGLQMAPPAA	0.9048	0.9848	RI	patient1
patient1_RI_12	HLA-B58:01	GLQMAPPAAW	0.9299	0.9919	RI	patient1
patient1_RI_12	HLA-B15:01	GLQMAPPAAW	0.9538	0.9838	RI	patient1
patient1_RI_12	HLA-B15:01	LQMAPPAAWG	0.9926	0.9825	RI	patient1
patient1_RI_12	HLA-B15:01	QMAPPAAWGG	0.9519	0.9614	RI	patient1
patient1_RI_12	HLA-B27:05	YLGLQMAPPAA	0.9742	0.9432	RI	patient1
patient1_RI_12	HLA-B15:01	YLGLQMAPPAA	0.9721	0.986	RI	patient1
patient1_RI_12	HLA-A24:02	LGLQMAPPAAW	0.9403	0.9635	RI	patient1
patient1_RI_12	HLA-B27:05	LGLQMAPPAAW	0.9941	0.904	RI	patient1
patient1_RI_12	HLA-B58:01	LGLQMAPPAAW	0.9954	0.9909	RI	patient1
patient1_RI_12	HLA-B15:01	LGLQMAPPAAW	0.903	0.9867	RI	patient1

patient1_RI_12	HLA-B15:01	GLQMAPPAAWG	0.9886	0.9605	RI	patient1
patient1_RI_12	HLA-B15:01	LQMAPPAAWGG	0.996	0.9474	RI	patient1
patient1_RI_12	HLA-B15:01	QMAPPAAWGGI	0.988	0.9022	RI	patient1
patient1_RI_12	HLA-A24:02	QYLGLQMAPPAA	0.979	0.9352	RI	patient1
patient1_RI_12	HLA-B15:01	QYLGLQMAPPAA	0.9721	0.9659	RI	patient1
patient1_RI_12	HLA-A24:02	YLGLQMAPPAAW	0.9941	0.971	RI	patient1
patient1_RI_12	HLA-B27:05	YLGLQMAPPAAW	0.9947	0.9387	RI	patient1
patient1_RI_12	HLA-B58:01	YLGLQMAPPAAW	0.9894	0.988	RI	patient1
patient1_RI_12	HLA-B15:01	YLGLQMAPPAAW	0.9912	0.9853	RI	patient1
patient1_RI_12	HLA-A24:02	LGLQMAPPAAWG	0.957	0.9102	RI	patient1
patient1_RI_12	HLA-B58:01	LGLQMAPPAAWG	0.991	0.9787	RI	patient1
patient1_RI_12	HLA-B15:01	LGLQMAPPAAWG	0.998	0.9613	RI	patient1
patient1_RI_12	HLA-B58:01	GLQMAPPAAWGG	0.9698	0.9211	RI	patient1
patient1_RI_12	HLA-B58:01	QMAPPAAWGGIS	0.9716	0.9197	RI	patient1
patient1_RI_12	HLA-A24:02	LPQPPQYLGLQMA	0.9396	0.9165	RI	patient1
patient1_RI_12	HLA-B15:01	QPPQYLGLQMAPP	0.9689	0.9412	RI	patient1
patient1_RI_12	HLA-B58:01	PPQYLGLQMAPPAA	0.9596	0.9034	RI	patient1
patient1_RI_12	HLA-A24:02	PQYLGLQMAPPAA	0.9758	0.9057	RI	patient1
patient1_RI_12	HLA-B08:01	PQYLGLQMAPPAA	0.9522	0.9523	RI	patient1
patient1_RI_12	HLA-B39:01	PQYLGLQMAPPAA	0.945	0.9759	RI	patient1
patient1_RI_12	HLA-B58:01	PQYLGLQMAPPAA	0.9754	0.9642	RI	patient1
patient1_RI_12	HLA-A24:02	QYLGLQMAPPAAW	0.9993	0.9358	RI	patient1
patient1_RI_12	HLA-B58:01	QYLGLQMAPPAAW	0.9858	0.9784	RI	patient1
patient1_RI_12	HLA-B15:01	QYLGLQMAPPAAW	0.9868	0.9446	RI	patient1
patient1_RI_12	HLA-A24:02	YLGLQMAPPAAWG	0.9907	0.9588	RI	patient1
patient1_RI_12	HLA-B08:01	YLGLQMAPPAAWG	0.937	0.9404	RI	patient1
patient1_RI_12	HLA-B58:01	YLGLQMAPPAAWG	0.9846	0.9732	RI	patient1
patient1_RI_12	HLA-B15:01	YLGLQMAPPAAWG	0.9993	0.9442	RI	patient1
patient1_RI_12	HLA-B58:01	LGLQMAPPAAWGG	0.9908	0.9223	RI	patient1
patient1_RI_12	HLA-B58:01	GLQMAPPAAWGGI	0.9408	0.9089	RI	patient1
patient1_RI_12	HLA-B39:01	LQMAPPAAWGGIS	0.9731	0.9076	RI	patient1
patient1_RI_12	HLA-B58:01	LQMAPPAAWGGIS	0.9746	0.9301	RI	patient1
patient1_RI_12	HLA-B08:01	QMAPPAAWGGISV	0.9481	0.942	RI	patient1
patient1_RI_12	HLA-B58:01	QMAPPAAWGGISV	0.9686	0.9392	RI	patient1
patient1_RI_12	HLA-B15:01	QMAPPAAWGGISV	0.9996	0.9201	RI	patient1
patient1_RI_12	HLA-A24:02	LLPQPPQYLGLQMA	0.9664	0.9625	RI	patient1
patient1_RI_12	HLA-B15:01	LPQPPQYLGLQMAP	0.9301	0.9019	RI	patient1
patient1_RI_12	HLA-B15:01	QPPQYLGLQMAPPAA	0.9484	0.924	RI	patient1
patient1_RI_12	HLA-B58:01	QYLGLQMAPPAAWG	0.9681	0.9597	RI	patient1
patient1_RI_12	HLA-A24:02	YLGLQMAPPAAWGG	0.982	0.9307	RI	patient1
patient1_RI_12	HLA-B58:01	YLGLQMAPPAAWGG	0.9404	0.9454	RI	patient1

patient1_RI_12	HLA-B58:01	LGLQMAPPAAWGGI	0.9657	0.9242	RI	patient1
patient1_RI_12	HLA-B58:01	GLQMAPPAAWGGIS	0.9486	0.9164	RI	patient1
patient1_RI_12	HLA-B40:01	LQMAPPAAWGGISV	0.9628	0.9456	RI	patient1
patient1_RI_12	HLA-B58:01	LQMAPPAAWGGISV	0.9399	0.9293	RI	patient1
patient1_RI_13	HLA-B27:05	LKLQFIHGYR	0.9985	0.9227	RI	patient1
patient1_RI_13	HLA-B27:05	SLKLQFIHGYR	0.9717	0.916	RI	patient1
patient1_RI_13	HLA-B27:05	HGYRGYDCRNN	0.9601	0.9113	RI	patient1
patient1_RI_13	HLA-B15:01	SLKLQFIHGYRG	0.9929	0.9482	RI	patient1
patient1_RI_13	HLA-B15:01	KLQFIHGYRGYD	0.99	0.9024	RI	patient1
patient1_RI_13	HLA-B15:01	FIHGYRGYDCRN	0.9822	0.9202	RI	patient1
patient1_RI_13	HLA-B15:01	IHGYRGYDCRNN	0.9887	0.9014	RI	patient1
patient1_RI_13	HLA-B58:01	HGYRGYDCRNNL	0.9586	0.9413	RI	patient1
patient1_RI_13	HLA-B27:05	EDSLKLQFIHGYR	0.999	0.9388	RI	patient1
patient1_RI_13	HLA-B39:01	EDSLKLQFIHGYR	0.9381	0.9755	RI	patient1
patient1_RI_13	HLA-B58:01	EDSLKLQFIHGYR	0.9977	0.9724	RI	patient1
patient1_RI_13	HLA-B15:01	EDSLKLQFIHGYR	0.9992	0.9554	RI	patient1
patient1_RI_13	HLA-B08:01	DSLKLQFIHGYRG	0.9779	0.9529	RI	patient1
patient1_RI_13	HLA-B27:05	DSLKLQFIHGYRG	0.9978	0.9028	RI	patient1
patient1_RI_13	HLA-B58:01	DSLKLQFIHGYRG	0.9832	0.9877	RI	patient1
patient1_RI_13	HLA-B15:01	DSLKLQFIHGYRG	0.9982	0.9775	RI	patient1
patient1_RI_13	HLA-B58:01	SLKLQFIHGYRGY	0.9513	0.9238	RI	patient1
patient1_RI_13	HLA-B15:01	SLKLQFIHGYRGY	0.9998	0.9129	RI	patient1
patient1_RI_13	HLA-B08:01	LKLQFIHGYRGYD	0.9494	0.9047	RI	patient1
patient1_RI_13	HLA-B58:01	LKLQFIHGYRGYD	0.9665	0.9679	RI	patient1
patient1_RI_13	HLA-B15:01	LKLQFIHGYRGYD	0.9951	0.9456	RI	patient1
patient1_RI_13	HLA-B27:05	KLQFIHGYRGYDC	0.9944	0.9427	RI	patient1
patient1_RI_13	HLA-B58:01	KLQFIHGYRGYDC	0.974	0.9824	RI	patient1
patient1_RI_13	HLA-B15:01	KLQFIHGYRGYDC	0.9774	0.9495	RI	patient1
patient1_RI_13	HLA-B58:01	LQFIHGYRGYDCR	0.9652	0.9651	RI	patient1
patient1_RI_13	HLA-B15:01	LQFIHGYRGYDCR	0.9837	0.9441	RI	patient1
patient1_RI_13	HLA-B58:01	QFIHGYRGYDCRN	0.9637	0.9678	RI	patient1
patient1_RI_13	HLA-B15:01	QFIHGYRGYDCRN	0.9639	0.9675	RI	patient1
patient1_RI_13	HLA-B15:01	FIHGYRGYDCRNN	0.9979	0.9308	RI	patient1
patient1_RI_13	HLA-B39:01	IHGYRGYDCRNNL	0.9961	0.9167	RI	patient1
patient1_RI_13	HLA-B15:01	IHGYRGYDCRNNL	0.989	0.9365	RI	patient1
patient1_RI_13	HLA-B58:01	APEDSLKLQFIHGY	0.9743	0.9291	RI	patient1
patient1_RI_13	HLA-A24:02	PEDSLKLQFIHGYR	0.9959	0.9557	RI	patient1
patient1_RI_13	HLA-A26:01	PEDSLKLQFIHGYR	0.9191	0.9328	RI	patient1
patient1_RI_13	HLA-B08:01	PEDSLKLQFIHGYR	0.9381	0.9851	RI	patient1
patient1_RI_13	HLA-B27:05	PEDSLKLQFIHGYR	0.9979	0.9071	RI	patient1
patient1_RI_13	HLA-B39:01	PEDSLKLQFIHGYR	0.901	0.9908	RI	patient1

patient1_RI_13	HLA-B58:01	PEDSLKLQFIHGYR	0.9948	0.9902	RI	patient1
patient1_RI_13	HLA-B15:01	PEDSLKLQFIHGYR	0.9933	0.9689	RI	patient1
patient1_RI_13	HLA-A24:02	EDSLKLQFIHGYRG	0.9946	0.9086	RI	patient1
patient1_RI_13	HLA-B08:01	EDSLKLQFIHGYRG	0.9694	0.9706	RI	patient1
patient1_RI_13	HLA-B27:05	EDSLKLQFIHGYRG	0.9856	0.9456	RI	patient1
patient1_RI_13	HLA-B58:01	EDSLKLQFIHGYRG	0.9915	0.9892	RI	patient1
patient1_RI_13	HLA-B15:01	EDSLKLQFIHGYRG	0.9972	0.9775	RI	patient1
patient1_RI_13	HLA-B08:01	DSLKLQFIHGYRGY	0.9004	0.9377	RI	patient1
patient1_RI_13	HLA-B58:01	DSLKLQFIHGYRGY	0.9832	0.985	RI	patient1
patient1_RI_13	HLA-B15:01	DSLKLQFIHGYRGY	0.9981	0.9717	RI	patient1
patient1_RI_13	HLA-B27:05	SLKLQFIHGYRGYD	0.9952	0.934	RI	patient1
patient1_RI_13	HLA-B58:01	SLKLQFIHGYRGYD	0.9661	0.9906	RI	patient1
patient1_RI_13	HLA-B15:01	SLKLQFIHGYRGYD	0.9972	0.9779	RI	patient1
patient1_RI_13	HLA-A24:02	LKLQFIHGYRGYDC	0.9751	0.9453	RI	patient1
patient1_RI_13	HLA-B27:05	LKLQFIHGYRGYDC	0.9831	0.9005	RI	patient1
patient1_RI_13	HLA-B58:01	LKLQFIHGYRGYDC	0.9608	0.9833	RI	patient1
patient1_RI_13	HLA-B15:01	LKLQFIHGYRGYDC	0.9431	0.9672	RI	patient1
patient1_RI_13	HLA-A24:02	KLQFIHGYRGYDCR	0.9596	0.9041	RI	patient1
patient1_RI_13	HLA-B27:05	KLQFIHGYRGYDCR	0.9745	0.9322	RI	patient1
patient1_RI_13	HLA-B15:01	KLQFIHGYRGYDCR	0.9124	0.975	RI	patient1
patient1_RI_13	HLA-B58:01	LQFIHGYRGYDCRN	0.9324	0.9725	RI	patient1
patient1_RI_13	HLA-B15:01	LQFIHGYRGYDCRN	0.9914	0.9637	RI	patient1
patient1_RI_13	HLA-B27:05	FIHGYRGYDCRNNL	0.9891	0.9044	RI	patient1
patient1_RI_13	HLA-B15:01	FIHGYRGYDCRNNL	0.9896	0.9584	RI	patient1
patient1_RI_13	HLA-B15:01	IHGYRGYDCRNRLF	0.9801	0.9173	RI	patient1
patient1_RI_13	HLA-B58:01	HGYRGYDCRNRLFY	0.9821	0.9083	RI	patient1
patient1_SE_1	HLA-B58:01	RVAGLLQF	0.9945	0.9424	SE	patient1
patient1_SE_1	HLA-B15:01	KQFFNRHCQRVA	0.9706	0.9616	SE	patient1
patient1_SE_1	HLA-B08:01	QFFNRHCQRVAG	0.9489	0.9368	SE	patient1
patient1_SE_1	HLA-B15:01	QFFNRHCQRVAG	0.9531	0.9313	SE	patient1
patient1_SE_1	HLA-B15:01	FFNRHCQRVAGG	0.9824	0.9084	SE	patient1
patient1_SE_1	HLA-B39:01	FNRHCQRVAGGL	0.9667	0.9357	SE	patient1
patient1_SE_1	HLA-B08:01	CKQFFNRHCQRVA	0.9419	0.9418	SE	patient1
patient1_SE_1	HLA-B39:01	CKQFFNRHCQRVA	0.9732	0.9781	SE	patient1
patient1_SE_1	HLA-B15:01	CKQFFNRHCQRVA	0.9509	0.9775	SE	patient1
patient1_SE_1	HLA-A24:02	KQFFNRHCQRVAG	0.9365	0.907	SE	patient1
patient1_SE_1	HLA-B08:01	KQFFNRHCQRVAG	0.9525	0.9662	SE	patient1
patient1_SE_1	HLA-B58:01	KQFFNRHCQRVAG	0.9188	0.9819	SE	patient1
patient1_SE_1	HLA-B15:01	KQFFNRHCQRVAG	0.9969	0.9729	SE	patient1
patient1_SE_1	HLA-B08:01	QFFNRHCQRVAGG	0.9895	0.927	SE	patient1
patient1_SE_1	HLA-B58:01	QFFNRHCQRVAGG	0.9145	0.9616	SE	patient1

patient1_SE_1	HLA-B15:01	QFFNRHCQRVAGG	0.9944	0.9382	SE	patient1
patient1_SE_1	HLA-B39:01	FFNRHCQRVAGGL	0.941	0.9199	SE	patient1
patient1_SE_1	HLA-B15:01	FFNRHCQRVAGGL	0.9953	0.9342	SE	patient1
patient1_SE_1	HLA-A24:02	FNRHCQRVAGLL	0.9831	0.9251	SE	patient1
patient1_SE_1	HLA-B39:01	FNRHCQRVAGLL	0.9789	0.9365	SE	patient1
patient1_SE_1	HLA-B58:01	RVAGLLQFEADK	0.9972	0.9197	SE	patient1
patient1_SE_1	HLA-B08:01	YCKQFFNRHCQRVA	0.929	0.9758	SE	patient1
patient1_SE_1	HLA-B15:01	YCKQFFNRHCQRVA	0.9463	0.987	SE	patient1
patient1_SE_1	HLA-A24:02	CKQFFNRHCQRVAG	0.9386	0.9282	SE	patient1
patient1_SE_1	HLA-B08:01	CKQFFNRHCQRVAG	0.9437	0.9747	SE	patient1
patient1_SE_1	HLA-B15:01	CKQFFNRHCQRVAG	0.9768	0.9702	SE	patient1
patient1_SE_1	HLA-A24:02	KQFFNRHCQRVAGG	0.9097	0.9095	SE	patient1
patient1_SE_1	HLA-B15:01	KQFFNRHCQRVAGG	0.9951	0.9353	SE	patient1
patient1_SE_1	HLA-B08:01	QFFNRHCQRVAGGL	0.9927	0.9465	SE	patient1
patient1_SE_1	HLA-B58:01	QFFNRHCQRVAGGL	0.9132	0.959	SE	patient1
patient1_SE_1	HLA-B15:01	FFNRHCQRVAGLL	0.985	0.9181	SE	patient1
patient1_SE_1	HLA-A24:02	FNRHCQRVAGLLQ	0.9679	0.9516	SE	patient1
patient1_SE_1	HLA-B39:01	QRVAGLLQFEADK	0.9504	0.9001	SE	patient1
patient1_SE_2	HLA-B39:01	YYLEMAERAAIS	0.9656	0.9113	SE	patient1
patient1_SE_2	HLA-B39:01	YYLEMAERAAISS	0.9937	0.9299	SE	patient1
patient1_SE_2	HLA-A24:02	YLEMAERAAISSG	0.9959	0.9214	SE	patient1
patient1_SE_2	HLA-A26:01	YLEMAERAAISSG	0.9152	0.952	SE	patient1
patient1_SE_2	HLA-B39:01	YLEMAERAAISSG	0.9858	0.9844	SE	patient1
patient1_SE_2	HLA-B58:01	YLEMAERAAISSG	0.9947	0.9671	SE	patient1
patient1_SE_2	HLA-B15:01	YLEMAERAAISSG	0.9999	0.9373	SE	patient1
patient1_SE_2	HLA-B08:01	FYYLEMAERAAISS	0.9917	0.9049	SE	patient1
patient1_SE_2	HLA-B39:01	FYYLEMAERAAISS	0.9879	0.9568	SE	patient1
patient1_SE_2	HLA-B58:01	FYYLEMAERAAISS	0.974	0.9096	SE	patient1
patient1_SE_2	HLA-B15:01	FYYLEMAERAAISS	0.9987	0.9267	SE	patient1
patient1_SE_2	HLA-B39:01	YYLEMAERAAISSG	0.9716	0.9885	SE	patient1
patient1_SE_2	HLA-B58:01	YYLEMAERAAISSG	0.9769	0.9797	SE	patient1
patient1_SE_2	HLA-B15:01	YYLEMAERAAISSG	0.9989	0.9495	SE	patient1
patient1_SE_2	HLA-A24:02	YLEMAERAAISSGI	0.9967	0.9052	SE	patient1
patient1_SE_2	HLA-B08:01	YLEMAERAAISSGI	0.9893	0.9137	SE	patient1
patient1_SE_2	HLA-B39:01	YLEMAERAAISSGI	0.9512	0.9876	SE	patient1
patient1_SE_2	HLA-B58:01	YLEMAERAAISSGI	0.9818	0.9737	SE	patient1
patient1_SE_2	HLA-B15:01	YLEMAERAAISSGI	0.9986	0.9488	SE	patient1
patient1_SE_2	HLA-B58:01	LEMAERAAISSGIE	0.946	0.9392	SE	patient1
patient1_SE_3	HLA-B58:01	DLPPGGGLDCKR	0.996	0.907	SE	patient1
patient1_SE_3	HLA-A24:02	GLDCKRGRMGLG	0.9825	0.9101	SE	patient1
patient1_SE_3	HLA-A24:02	GGLDCKRGRMGLG	0.9959	0.9274	SE	patient1

patient1_SE_3	HLA-A24:02	GLDCKRGRMGLGS	0.9915	0.9057	SE	patient1
patient1_SE_3	HLA-A24:02	LDCKRGRMGLGSP	0.9909	0.9272	SE	patient1
patient1_SE_3	HLA-A24:02	IPDLPPGGGLDCKR	0.9909	0.9605	SE	patient1
patient1_SE_3	HLA-A24:02	PDLPPGGGLDCKRG	0.925	0.9148	SE	patient1
patient1_SE_3	HLA-A24:02	DLPPGGGLDCKRGR	0.9839	0.943	SE	patient1
patient1_SE_3	HLA-A24:02	GGGLDCKRGRMGLG	0.9561	0.9205	SE	patient1
patient1_SE_3	HLA-A24:02	GLDCKRGRMGLGSP	0.9171	0.9426	SE	patient1
patient1_SE_3	HLA-A24:02	LDCKRGRMGLGSPT	0.9087	0.942	SE	patient1
patient1_SE_3	HLA-A24:02	DCKRGRMGLGSPTP	0.9127	0.9053	SE	patient1
patient1_SE_11	HLA-B58:01	QGNERSLW	0.9944	0.9701	SE	patient1
patient1_SE_11	HLA-B58:01	NSERSLWGSW	0.9843	0.9649	SE	patient1
patient1_SE_11	HLA-B27:05	SERSLWGSWL	0.978	0.9248	SE	patient1
patient1_SE_11	HLA-B58:01	QGNERSLWGS	0.9616	0.9599	SE	patient1
patient1_SE_11	HLA-B58:01	GNSERSLWGSW	0.9987	0.9702	SE	patient1
patient1_SE_11	HLA-B15:01	GNSERSLWGSW	0.9842	0.9328	SE	patient1
patient1_SE_11	HLA-B27:05	NSERSLWGSWL	0.9877	0.9081	SE	patient1
patient1_SE_11	HLA-B27:05	GLDLCNQNSER	0.9999	0.9236	SE	patient1
patient1_SE_11	HLA-B39:01	GLDLCNQNSER	0.9722	0.9277	SE	patient1
patient1_SE_11	HLA-B58:01	GLDLCNQNSER	0.9977	0.9629	SE	patient1
patient1_SE_11	HLA-B58:01	LCNQNSERSLW	0.9997	0.9304	SE	patient1
patient1_SE_11	HLA-B39:01	CNQNSERSLWG	0.9249	0.9593	SE	patient1
patient1_SE_11	HLA-B58:01	CNQNSERSLWG	0.9993	0.9608	SE	patient1
patient1_SE_11	HLA-B15:01	CNQNSERSLWG	0.9994	0.9021	SE	patient1
patient1_SE_11	HLA-B39:01	NQNSERSLWGS	0.9148	0.9618	SE	patient1
patient1_SE_11	HLA-B58:01	QGNERSLWGSW	0.9994	0.9708	SE	patient1
patient1_SE_11	HLA-B15:01	QGNERSLWGSW	0.9949	0.9207	SE	patient1
patient1_SE_11	HLA-B39:01	GNSERSLWGSWL	0.9363	0.9197	SE	patient1
patient1_SE_11	HLA-B58:01	GNSERSLWGSWL	0.9842	0.9441	SE	patient1
patient1_SE_11	HLA-B58:01	NSERSLWGSWLP	0.9686	0.9567	SE	patient1
patient1_SE_11	HLA-B58:01	SERSLWGSWLPC	0.9038	0.9672	SE	patient1
patient1_SE_11	HLA-B39:01	CGLDLCNQNSER	0.9767	0.9092	SE	patient1
patient1_SE_11	HLA-B58:01	CGLDLCNQNSER	0.9987	0.949	SE	patient1
patient1_SE_11	HLA-B39:01	GLDLCNQNSERS	0.9697	0.9439	SE	patient1
patient1_SE_11	HLA-B58:01	GLDLCNQNSERS	0.9985	0.969	SE	patient1
patient1_SE_11	HLA-B39:01	LDLCNQNSERSL	0.9901	0.9302	SE	patient1
patient1_SE_11	HLA-B58:01	LDLCNQNSERSL	0.9987	0.9172	SE	patient1
patient1_SE_11	HLA-A26:01	DLCNQNSERSLW	0.9859	0.9644	SE	patient1
patient1_SE_11	HLA-B58:01	DLCNQNSERSLW	0.9991	0.9743	SE	patient1
patient1_SE_11	HLA-B15:01	DLCNQNSERSLW	0.9953	0.9028	SE	patient1
patient1_SE_11	HLA-A24:02	LCNQNSERSLWG	0.9944	0.905	SE	patient1
patient1_SE_11	HLA-B39:01	LCNQNSERSLWG	0.9239	0.9554	SE	patient1

patient1_SE_11	HLA-B58:01	LCNQNSERSLWLG	0.999	0.9645	SE	patient1
patient1_SE_11	HLA-B39:01	CNQNSERSLWGS	0.9224	0.9673	SE	patient1
patient1_SE_11	HLA-B58:01	CNQNSERSLWGS	0.9982	0.9688	SE	patient1
patient1_SE_11	HLA-B58:01	NQNSERSLWGSW	0.9991	0.943	SE	patient1
patient1_SE_11	HLA-B15:01	NQNSERSLWGSW	0.9994	0.9152	SE	patient1
patient1_SE_11	HLA-B39:01	QGNERSLWGSWL	0.9597	0.926	SE	patient1
patient1_SE_11	HLA-B58:01	QGNERSLWGSWL	0.9961	0.9565	SE	patient1
patient1_SE_11	HLA-B58:01	GNSERSLWGSWLP	0.9834	0.9639	SE	patient1
patient1_SE_11	HLA-B58:01	NSERSLWGSWLPC	0.9899	0.9691	SE	patient1
patient1_SE_11	HLA-B15:01	NSERSLWGSWLPC	0.9187	0.936	SE	patient1
patient1_SE_11	HLA-B39:01	VCGLDLCNQNSER	0.9063	0.9667	SE	patient1
patient1_SE_11	HLA-B58:01	VCGLDLCNQNSER	0.9963	0.9777	SE	patient1
patient1_SE_11	HLA-B15:01	VCGLDLCNQNSER	0.9789	0.9109	SE	patient1
patient1_SE_11	HLA-B58:01	CGLDLCNQNSERS	0.9951	0.9827	SE	patient1
patient1_SE_11	HLA-B15:01	CGLDLCNQNSERS	0.995	0.9563	SE	patient1
patient1_SE_11	HLA-B40:01	GLDLCNQNSERSL	0.9651	0.9108	SE	patient1
patient1_SE_11	HLA-B58:01	GLDLCNQNSERSL	0.9964	0.9838	SE	patient1
patient1_SE_11	HLA-B15:01	GLDLCNQNSERSL	0.9996	0.9515	SE	patient1
patient1_SE_11	HLA-A24:02	LDLCNQNSERSLW	0.9958	0.9531	SE	patient1
patient1_SE_11	HLA-B40:01	LDLCNQNSERSLW	0.9282	0.9204	SE	patient1
patient1_SE_11	HLA-B58:01	LDLCNQNSERSLW	0.9992	0.9853	SE	patient1
patient1_SE_11	HLA-B15:01	LDLCNQNSERSLW	0.9937	0.9332	SE	patient1
patient1_SE_11	HLA-A24:02	DLCNQNSERSLWLG	0.9759	0.9539	SE	patient1
patient1_SE_11	HLA-A26:01	DLCNQNSERSLWLG	0.9849	0.9782	SE	patient1
patient1_SE_11	HLA-B58:01	DLCNQNSERSLWLG	0.9839	0.9858	SE	patient1
patient1_SE_11	HLA-B15:01	DLCNQNSERSLWLG	0.9767	0.9527	SE	patient1
patient1_SE_11	HLA-A24:02	LCNQNSERSLWGS	0.9565	0.9404	SE	patient1
patient1_SE_11	HLA-B58:01	LCNQNSERSLWGS	0.9746	0.969	SE	patient1
patient1_SE_11	HLA-A24:02	CNQNSERSLWGSW	0.984	0.9433	SE	patient1
patient1_SE_11	HLA-B58:01	CNQNSERSLWGSW	0.9967	0.9835	SE	patient1
patient1_SE_11	HLA-B15:01	CNQNSERSLWGSW	0.9891	0.9368	SE	patient1
patient1_SE_11	HLA-B39:01	NQNSERSLWGSWL	0.9824	0.9825	SE	patient1
patient1_SE_11	HLA-B58:01	NQNSERSLWGSWL	0.9853	0.9336	SE	patient1
patient1_SE_11	HLA-B15:01	NQNSERSLWGSWL	0.9993	0.9171	SE	patient1
patient1_SE_11	HLA-B58:01	QGNERSLWGSWLP	0.9694	0.9641	SE	patient1
patient1_SE_11	HLA-B58:01	GNSERSLWGSWLPC	0.971	0.932	SE	patient1
patient1_SE_11	HLA-B58:01	NSERSLWGSWLPC	0.9211	0.9641	SE	patient1
patient1_SE_11	HLA-B15:01	NSERSLWGSWLPC	0.9052	0.9368	SE	patient1
patient1_SE_12	HLA-B15:01	KTIIVTDNAL	0.9649	0.9114	SE	patient1
patient1_SE_12	HLA-B15:01	VTDNALPQEN	0.9051	0.9371	SE	patient1
patient1_SE_12	HLA-B27:05	VKTIIVTDNAL	0.9994	0.9211	SE	patient1

patient1_SE_12	HLA-B58:01	VKTIIVTDNAL	0.9769	0.902	SE	patient1
patient1_SE_12	HLA-B58:01	VTDNALPQENG	0.9498	0.9695	SE	patient1
patient1_SE_12	HLA-B15:01	VTDNALPQENG	0.997	0.9316	SE	patient1
patient1_SE_12	HLA-B58:01	TDNALPQENGL	0.9774	0.9255	SE	patient1
patient1_SE_12	HLA-B27:05	TVKTIIVTDNAL	0.9993	0.916	SE	patient1
patient1_SE_12	HLA-B58:01	TVKTIIVTDNAL	0.976	0.9589	SE	patient1
patient1_SE_12	HLA-B15:01	TVKTIIVTDNAL	0.9997	0.9104	SE	patient1
patient1_SE_12	HLA-B58:01	KTIIVTDNALPQ	0.927	0.9233	SE	patient1
patient1_SE_12	HLA-B15:01	KTIIVTDNALPQ	0.9742	0.9205	SE	patient1
patient1_SE_12	HLA-B58:01	VTDNALPQENGL	0.9951	0.9603	SE	patient1
patient1_SE_12	HLA-B15:01	VTDNALPQENGL	0.999	0.9183	SE	patient1
patient1_SE_12	HLA-B58:01	TDNALPQENGLS	0.9951	0.9326	SE	patient1
patient1_SE_12	HLA-B58:01	RTTVKTIIVTDNA	0.9919	0.9236	SE	patient1
patient1_SE_12	HLA-B58:01	TTVKTIIVTDNAL	0.9986	0.9405	SE	patient1
patient1_SE_12	HLA-B58:01	TVKTIIVTDNALP	0.9813	0.9547	SE	patient1
patient1_SE_12	HLA-B15:01	TVKTIIVTDNALP	0.9993	0.913	SE	patient1
patient1_SE_12	HLA-B39:01	VKTIIVTDNALPQ	0.9061	0.9522	SE	patient1
patient1_SE_12	HLA-B58:01	VKTIIVTDNALPQ	0.9179	0.9574	SE	patient1
patient1_SE_12	HLA-B15:01	VKTIIVTDNALPQ	0.9936	0.9319	SE	patient1
patient1_SE_12	HLA-B58:01	KTIIVTDNALPQE	0.984	0.9083	SE	patient1
patient1_SE_12	HLA-B15:01	KTIIVTDNALPQE	0.995	0.9113	SE	patient1
patient1_SE_12	HLA-B58:01	VTDNALPQENGLS	0.997	0.9545	SE	patient1
patient1_SE_12	HLA-B15:01	VTDNALPQENGLS	0.9983	0.9115	SE	patient1
patient1_SE_12	HLA-B58:01	TDNALPQENGLSP	0.9827	0.9372	SE	patient1
patient1_SE_12	HLA-B15:01	TDNALPQENGLSP	0.9819	0.9298	SE	patient1
patient1_SE_12	HLA-B58:01	RTTVKTIIVTDNAL	0.9958	0.9606	SE	patient1
patient1_SE_12	HLA-B58:01	TTVKTIIVTDNALP	0.9654	0.9657	SE	patient1
patient1_SE_12	HLA-B15:01	TTVKTIIVTDNALP	0.9637	0.9181	SE	patient1
patient1_SE_12	HLA-B58:01	TVKTIIVTDNALPQ	0.9103	0.977	SE	patient1
patient1_SE_12	HLA-B15:01	TVKTIIVTDNALPQ	0.9944	0.9451	SE	patient1
patient1_SE_12	HLA-B27:05	VKTIIVTDNALPQE	0.9961	0.9146	SE	patient1
patient1_SE_12	HLA-B15:01	VKTIIVTDNALPQE	0.9505	0.9469	SE	patient1
patient1_SE_12	HLA-B15:01	TIIVTDNALPQENG	0.9871	0.9224	SE	patient1
patient1_SE_12	HLA-B58:01	IVTDNALPQENGLS	0.9616	0.907	SE	patient1
patient1_SE_12	HLA-B15:01	VTDNALPQENGLSP	0.9561	0.9213	SE	patient1
patient1_SE_18	HLA-B27:05	FSLVEMCGPA	0.9218	0.905	SE	patient1
patient1_SE_18	HLA-B27:05	SFKDFSLVEMC	0.986	0.9033	SE	patient1
patient1_SE_18	HLA-B15:01	SFKDFSLVEMC	0.9448	0.9404	SE	patient1
patient1_SE_18	HLA-B27:05	FKDFSLVEMCG	0.9945	0.9396	SE	patient1
patient1_SE_18	HLA-B39:01	FKDFSLVEMCG	0.9889	0.9779	SE	patient1
patient1_SE_18	HLA-B58:01	FKDFSLVEMCG	0.9879	0.9679	SE	patient1

patient1_SE_18	HLA-B15:01	FKDFSLVEMCG	0.9965	0.9772	SE	patient1
patient1_SE_18	HLA-B15:01	KDFSLVEMCGP	0.9254	0.9534	SE	patient1
patient1_SE_18	HLA-B15:01	DFSLVEMCGPA	0.9189	0.9202	SE	patient1
patient1_SE_18	HLA-B15:01	FSLVEMCGPAM	0.9856	0.9035	SE	patient1
patient1_SE_18	HLA-B27:05	TSFKDFSLVEMC	0.997	0.914	SE	patient1
patient1_SE_18	HLA-B15:01	TSFKDFSLVEMC	0.9952	0.9564	SE	patient1
patient1_SE_18	HLA-B27:05	SFKDFSLVEMCG	0.9959	0.9221	SE	patient1
patient1_SE_18	HLA-B58:01	SFKDFSLVEMCG	0.9686	0.9651	SE	patient1
patient1_SE_18	HLA-B15:01	SFKDFSLVEMCG	0.999	0.9821	SE	patient1
patient1_SE_18	HLA-B39:01	FKDFSLVEMCGP	0.9953	0.9493	SE	patient1
patient1_SE_18	HLA-B58:01	FKDFSLVEMCGP	0.9962	0.9496	SE	patient1
patient1_SE_18	HLA-B15:01	FKDFSLVEMCGP	0.9963	0.958	SE	patient1
patient1_SE_18	HLA-B58:01	KDFSLVEMCGPA	0.9091	0.937	SE	patient1
patient1_SE_18	HLA-B15:01	KDFSLVEMCGPA	0.9924	0.9176	SE	patient1
patient1_SE_18	HLA-B39:01	DFSLVEMCGPAM	0.9526	0.9416	SE	patient1
patient1_SE_18	HLA-B15:01	DFSLVEMCGPAM	0.995	0.9461	SE	patient1
patient1_SE_18	HLA-B58:01	FSLVEMCGPAMF	0.972	0.941	SE	patient1
patient1_SE_18	HLA-B15:01	FSLVEMCGPAMF	0.9978	0.9159	SE	patient1
patient1_SE_18	HLA-A26:01	VEMCGPAMFPAG	0.9184	0.9286	SE	patient1
patient1_SE_18	HLA-B58:01	VEMCGPAMFPAG	0.996	0.9039	SE	patient1
patient1_SE_18	HLA-B15:01	VEMCGPAMFPAG	0.9994	0.9189	SE	patient1
patient1_SE_18	HLA-B08:01	EMCGPAMFPAGP	0.9023	0.9346	SE	patient1
patient1_SE_18	HLA-B15:01	DTSFKDFSLVEMC	0.9975	0.9376	SE	patient1
patient1_SE_18	HLA-B27:05	TSFKDFSLVEMCG	0.9937	0.9032	SE	patient1
patient1_SE_18	HLA-B58:01	TSFKDFSLVEMCG	0.9951	0.9766	SE	patient1
patient1_SE_18	HLA-B15:01	TSFKDFSLVEMCG	0.9989	0.9815	SE	patient1
patient1_SE_18	HLA-B27:05	SFKDFSLVEMCGP	0.9945	0.9051	SE	patient1
patient1_SE_18	HLA-B58:01	SFKDFSLVEMCGP	0.9548	0.967	SE	patient1
patient1_SE_18	HLA-B15:01	SFKDFSLVEMCGP	0.9972	0.9707	SE	patient1
patient1_SE_18	HLA-B39:01	FKDFSLVEMCGPA	0.999	0.9632	SE	patient1
patient1_SE_18	HLA-B58:01	FKDFSLVEMCGPA	0.9967	0.9708	SE	patient1
patient1_SE_18	HLA-B15:01	FKDFSLVEMCGPA	0.9986	0.9661	SE	patient1
patient1_SE_18	HLA-B39:01	KDFSLVEMCGPAM	0.9278	0.9569	SE	patient1
patient1_SE_18	HLA-B58:01	KDFSLVEMCGPAM	0.9647	0.9569	SE	patient1
patient1_SE_18	HLA-B15:01	KDFSLVEMCGPAM	0.9978	0.9571	SE	patient1
patient1_SE_18	HLA-B39:01	DFSLVEMCGPAMF	0.9308	0.922	SE	patient1
patient1_SE_18	HLA-B58:01	DFSLVEMCGPAMF	0.9722	0.9121	SE	patient1
patient1_SE_18	HLA-B15:01	DFSLVEMCGPAMF	0.9923	0.9441	SE	patient1
patient1_SE_18	HLA-B58:01	FSLVEMCGPAMFP	0.964	0.9555	SE	patient1
patient1_SE_18	HLA-B15:01	FSLVEMCGPAMFP	0.9829	0.9004	SE	patient1
patient1_SE_18	HLA-B15:01	SLVEMCGPAMFPA	0.9961	0.9423	SE	patient1

patient1_SE_18	HLA-B58:01	LVEMCGPAMFPAG	0.9836	0.9084	SE	patient1
patient1_SE_18	HLA-B15:01	LVEMCGPAMFPAG	0.9969	0.909	SE	patient1
patient1_SE_18	HLA-A26:01	VEMCGPAMFPAGP	0.9098	0.9379	SE	patient1
patient1_SE_18	HLA-B39:01	VEMCGPAMFPAGP	0.9077	0.9798	SE	patient1
patient1_SE_18	HLA-B58:01	VEMCGPAMFPAGP	0.9934	0.9055	SE	patient1
patient1_SE_18	HLA-B15:01	VEMCGPAMFPAGP	0.9892	0.913	SE	patient1
patient1_SE_18	HLA-A26:01	EMCGPAMFPAGPP	0.9059	0.9538	SE	patient1
patient1_SE_18	HLA-B08:01	EMCGPAMFPAGPP	0.965	0.9507	SE	patient1
patient1_SE_18	HLA-B58:01	TDTSEKDFSLVEMC	0.9957	0.968	SE	patient1
patient1_SE_18	HLA-B15:01	TDTSEKDFSLVEMC	0.9332	0.9687	SE	patient1
patient1_SE_18	HLA-B58:01	DTSFKDFSLVEMCG	0.9815	0.9776	SE	patient1
patient1_SE_18	HLA-B15:01	DTSFKDFSLVEMCG	0.975	0.9711	SE	patient1
patient1_SE_18	HLA-B08:01	TSFKDFSLVEMCGP	0.9262	0.9238	SE	patient1
patient1_SE_18	HLA-B58:01	TSFKDFSLVEMCGP	0.9792	0.9805	SE	patient1
patient1_SE_18	HLA-B15:01	TSFKDFSLVEMCGP	0.976	0.9863	SE	patient1
patient1_SE_18	HLA-B27:05	SFKDFSLVEMCGPA	0.9879	0.9564	SE	patient1
patient1_SE_18	HLA-B58:01	SFKDFSLVEMCGPA	0.9091	0.9763	SE	patient1
patient1_SE_18	HLA-B15:01	SFKDFSLVEMCGPA	0.9858	0.9839	SE	patient1
patient1_SE_18	HLA-B27:05	FKDFSLVEMCGPAM	0.9994	0.9266	SE	patient1
patient1_SE_18	HLA-B39:01	FKDFSLVEMCGPAM	0.9971	0.9711	SE	patient1
patient1_SE_18	HLA-B58:01	FKDFSLVEMCGPAM	0.9795	0.9784	SE	patient1
patient1_SE_18	HLA-B15:01	FKDFSLVEMCGPAM	0.9961	0.9861	SE	patient1
patient1_SE_18	HLA-B27:05	KDFSLVEMCGPAMF	0.9957	0.9011	SE	patient1
patient1_SE_18	HLA-B58:01	KDFSLVEMCGPAMF	0.9513	0.9618	SE	patient1
patient1_SE_18	HLA-B15:01	KDFSLVEMCGPAMF	0.9965	0.9658	SE	patient1
patient1_SE_18	HLA-B58:01	FSLVEMCGPAMFPA	0.9567	0.9796	SE	patient1
patient1_SE_18	HLA-B15:01	FSLVEMCGPAMFPA	0.9649	0.9684	SE	patient1
patient1_SE_18	HLA-B58:01	SLVEMCGPAMFPAG	0.9135	0.9728	SE	patient1
patient1_SE_18	HLA-B15:01	SLVEMCGPAMFPAG	0.9958	0.9664	SE	patient1
patient1_SE_18	HLA-B58:01	LVEMCGPAMFPAGP	0.926	0.9121	SE	patient1
patient1_SE_18	HLA-A24:02	VEMCGPAMFPAGPP	0.9776	0.9083	SE	patient1
patient1_SE_18	HLA-B58:01	VEMCGPAMFPAGPP	0.9677	0.907	SE	patient1
patient1_SE_18	HLA-B15:01	VEMCGPAMFPAGPP	0.9948	0.9063	SE	patient1
patient1_SE_18	HLA-B15:01	EMCGPAMFPAGPPW	0.9645	0.9048	SE	patient1
patient1_SE_21	HLA-B27:05	FKDFSLVEME	0.9728	0.9307	SE	patient1
patient1_SE_21	HLA-B39:01	FKDFSLVEME	0.9694	0.9053	SE	patient1
patient1_SE_21	HLA-B15:01	FKDFSLVEME	0.9649	0.9576	SE	patient1
patient1_SE_21	HLA-B27:05	KDFSLVEMEA	0.9546	0.9361	SE	patient1
patient1_SE_21	HLA-B27:05	DFSLVEMEA	0.9347	0.9256	SE	patient1
patient1_SE_21	HLA-B27:05	FSLVEMEAAP	0.9544	0.9073	SE	patient1
patient1_SE_21	HLA-B15:01	FSLVEMEAAP	0.9161	0.9452	SE	patient1

patient1_SE_21	HLA-B15:01	SLVEMEAAPF	0.9992	0.9003	SE	patient1
patient1_SE_21	HLA-B27:05	SFKDFSLVEME	0.987	0.9416	SE	patient1
patient1_SE_21	HLA-B58:01	SFKDFSLVEME	0.9084	0.9154	SE	patient1
patient1_SE_21	HLA-B15:01	SFKDFSLVEME	0.9977	0.954	SE	patient1
patient1_SE_21	HLA-B27:05	FKDFSLVEMEA	0.9987	0.9374	SE	patient1
patient1_SE_21	HLA-B39:01	FKDFSLVEMEA	0.9997	0.937	SE	patient1
patient1_SE_21	HLA-B58:01	FKDFSLVEMEA	0.9944	0.956	SE	patient1
patient1_SE_21	HLA-B15:01	FKDFSLVEMEA	0.9987	0.9698	SE	patient1
patient1_SE_21	HLA-B27:05	KDFSLVEMEAA	0.9946	0.913	SE	patient1
patient1_SE_21	HLA-B15:01	KDFSLVEMEAA	0.9901	0.9434	SE	patient1
patient1_SE_21	HLA-B27:05	DFSLVEMEAAP	0.998	0.9373	SE	patient1
patient1_SE_21	HLA-B58:01	DFSLVEMEAAP	0.9652	0.983	SE	patient1
patient1_SE_21	HLA-B15:01	DFSLVEMEAAP	0.997	0.9648	SE	patient1
patient1_SE_21	HLA-B58:01	FSLVEMEAAPF	0.9415	0.9323	SE	patient1
patient1_SE_21	HLA-B15:01	FSLVEMEAAPF	0.9982	0.9372	SE	patient1
patient1_SE_21	HLA-B27:05	TSFKDFSLVEME	0.9987	0.9374	SE	patient1
patient1_SE_21	HLA-B58:01	TSFKDFSLVEME	0.9964	0.9377	SE	patient1
patient1_SE_21	HLA-B15:01	TSFKDFSLVEME	0.9997	0.967	SE	patient1
patient1_SE_21	HLA-B27:05	SFKDFSLVEMEA	0.9979	0.9367	SE	patient1
patient1_SE_21	HLA-B58:01	SFKDFSLVEMEA	0.9697	0.9296	SE	patient1
patient1_SE_21	HLA-B15:01	SFKDFSLVEMEA	0.9993	0.9624	SE	patient1
patient1_SE_21	HLA-B27:05	FKDFSLVEMEAA	0.9998	0.9259	SE	patient1
patient1_SE_21	HLA-B39:01	FKDFSLVEMEAA	0.9998	0.9499	SE	patient1
patient1_SE_21	HLA-B58:01	FKDFSLVEMEAA	0.9992	0.9371	SE	patient1
patient1_SE_21	HLA-B15:01	FKDFSLVEMEAA	0.9996	0.9616	SE	patient1
patient1_SE_21	HLA-B27:05	KDFSLVEMEAAP	0.9995	0.9378	SE	patient1
patient1_SE_21	HLA-B58:01	KDFSLVEMEAAP	0.9919	0.9526	SE	patient1
patient1_SE_21	HLA-B15:01	KDFSLVEMEAAP	0.9986	0.9597	SE	patient1
patient1_SE_21	HLA-B27:05	DFSLVEMEAAPF	0.9967	0.9356	SE	patient1
patient1_SE_21	HLA-B39:01	DFSLVEMEAAPF	0.9535	0.9754	SE	patient1
patient1_SE_21	HLA-B58:01	DFSLVEMEAAPF	0.9185	0.9782	SE	patient1
patient1_SE_21	HLA-B15:01	DFSLVEMEAAPF	0.9966	0.9654	SE	patient1
patient1_SE_21	HLA-B27:05	SLVEMEAAPFRS	0.9937	0.933	SE	patient1
patient1_SE_21	HLA-B58:01	SLVEMEAAPFRS	0.9417	0.9571	SE	patient1
patient1_SE_21	HLA-B15:01	SLVEMEAAPFRS	0.9414	0.9618	SE	patient1
patient1_SE_21	HLA-B58:01	LVEMEAAPFRSK	0.9463	0.921	SE	patient1
patient1_SE_21	HLA-B39:01	VEMEAAPFRSKE	0.9838	0.9405	SE	patient1
patient1_SE_21	HLA-B39:01	EMEAAPFRSKEP	0.9043	0.9049	SE	patient1
patient1_SE_21	HLA-B39:01	DTSFKDFSLVEME	0.9857	0.9502	SE	patient1
patient1_SE_21	HLA-B58:01	DTSFKDFSLVEME	0.9976	0.9358	SE	patient1
patient1_SE_21	HLA-B15:01	DTSFKDFSLVEME	0.9997	0.9415	SE	patient1

patient1_SE_21	HLA-B27:05	TSFKDFSLVEMEA	0.9993	0.9232	SE	patient1
patient1_SE_21	HLA-B39:01	TSFKDFSLVEMEA	0.9164	0.9709	SE	patient1
patient1_SE_21	HLA-B58:01	TSFKDFSLVEMEA	0.9982	0.9492	SE	patient1
patient1_SE_21	HLA-B15:01	TSFKDFSLVEMEA	0.9981	0.9712	SE	patient1
patient1_SE_21	HLA-B27:05	SFKDFSLVEMEAA	0.9996	0.9145	SE	patient1
patient1_SE_21	HLA-B39:01	SFKDFSLVEMEAA	0.9731	0.9728	SE	patient1
patient1_SE_21	HLA-B58:01	SFKDFSLVEMEAA	0.995	0.9238	SE	patient1
patient1_SE_21	HLA-B15:01	SFKDFSLVEMEAA	0.9995	0.9454	SE	patient1
patient1_SE_21	HLA-B27:05	FKDFSLVEMEAAAP	0.9997	0.9479	SE	patient1
patient1_SE_21	HLA-B39:01	FKDFSLVEMEAAAP	0.9993	0.9847	SE	patient1
patient1_SE_21	HLA-B58:01	FKDFSLVEMEAAAP	0.9989	0.9536	SE	patient1
patient1_SE_21	HLA-B15:01	FKDFSLVEMEAAAP	0.9995	0.9784	SE	patient1
patient1_SE_21	HLA-B27:05	KDFSLVEMEAAAPF	0.9994	0.9413	SE	patient1
patient1_SE_21	HLA-B39:01	KDFSLVEMEAAAPF	0.9444	0.9739	SE	patient1
patient1_SE_21	HLA-B58:01	KDFSLVEMEAAAPF	0.984	0.9746	SE	patient1
patient1_SE_21	HLA-B15:01	KDFSLVEMEAAAPF	0.9995	0.9691	SE	patient1
patient1_SE_21	HLA-B27:05	DFSLVEMEAAAPFR	0.9986	0.9525	SE	patient1
patient1_SE_21	HLA-B39:01	DFSLVEMEAAAPFR	0.9241	0.9748	SE	patient1
patient1_SE_21	HLA-B58:01	DFSLVEMEAAAPFR	0.9954	0.9908	SE	patient1
patient1_SE_21	HLA-B15:01	DFSLVEMEAAAPFR	0.9981	0.9828	SE	patient1
patient1_SE_21	HLA-B27:05	FSLVEMEAAAPFRS	0.9964	0.9271	SE	patient1
patient1_SE_21	HLA-B58:01	FSLVEMEAAAPFRS	0.9722	0.9634	SE	patient1
patient1_SE_21	HLA-B15:01	FSLVEMEAAAPFRS	0.9703	0.9601	SE	patient1
patient1_SE_21	HLA-B27:05	SLVEMEAAAPFRSK	0.9967	0.9166	SE	patient1
patient1_SE_21	HLA-B58:01	SLVEMEAAAPFRSK	0.9706	0.973	SE	patient1
patient1_SE_21	HLA-B15:01	SLVEMEAAAPFRSK	0.9963	0.9513	SE	patient1
patient1_SE_21	HLA-B39:01	LVEMEAAAPFRSKE	0.9762	0.9293	SE	patient1
patient1_SE_21	HLA-B58:01	LVEMEAAAPFRSKE	0.9936	0.9234	SE	patient1
patient1_SE_21	HLA-B39:01	VEMEAAAPFRSKEP	0.9691	0.9461	SE	patient1
patient1_SE_21	HLA-B08:01	EMEAAPFRSKEPC	0.9954	0.9155	SE	patient1
patient1_SE_21	HLA-B39:01	EMEAAPFRSKEPC	0.9639	0.9427	SE	patient1
patient1_SE_21	HLA-B58:01	TDTSFKDFSLVEME	0.9935	0.9661	SE	patient1
patient1_SE_21	HLA-B15:01	TDTSFKDFSLVEME	0.9957	0.9528	SE	patient1
patient1_SE_21	HLA-B58:01	DTSFKDFSLVEMEA	0.9936	0.9666	SE	patient1
patient1_SE_21	HLA-B15:01	DTSFKDFSLVEMEA	0.9967	0.9714	SE	patient1
patient1_SE_21	HLA-B08:01	TSFKDFSLVEMEAA	0.9882	0.9137	SE	patient1
patient1_SE_21	HLA-B27:05	TSFKDFSLVEMEAA	0.9966	0.9112	SE	patient1
patient1_SE_21	HLA-B58:01	TSFKDFSLVEMEAA	0.9948	0.9637	SE	patient1
patient1_SE_21	HLA-B15:01	TSFKDFSLVEMEAA	0.9941	0.9693	SE	patient1
patient1_SE_21	HLA-B08:01	SFKDFSLVEMEAAAP	0.9121	0.9393	SE	patient1
patient1_SE_21	HLA-B27:05	SFKDFSLVEMEAAAP	0.9951	0.9542	SE	patient1

patient1_SE_21	HLA-B58:01	SFKDFSLVEMEAAP	0.9695	0.9551	SE	patient1
patient1_SE_21	HLA-B15:01	SFKDFSLVEMEAAP	0.9967	0.9728	SE	patient1
patient1_SE_21	HLA-B27:05	FKDFSLVEMEAAPF	0.9995	0.9485	SE	patient1
patient1_SE_21	HLA-B39:01	FKDFSLVEMEAAPF	0.9973	0.9705	SE	patient1
patient1_SE_21	HLA-B58:01	FKDFSLVEMEAAPF	0.9897	0.9618	SE	patient1
patient1_SE_21	HLA-B15:01	FKDFSLVEMEAAPF	0.9974	0.9837	SE	patient1
patient1_SE_21	HLA-B08:01	KDFSLVEMEAAPFR	0.9364	0.9282	SE	patient1
patient1_SE_21	HLA-B27:05	KDFSLVEMEAAPFR	0.9993	0.9631	SE	patient1
patient1_SE_21	HLA-B39:01	KDFSLVEMEAAPFR	0.9239	0.9894	SE	patient1
patient1_SE_21	HLA-B58:01	KDFSLVEMEAAPFR	0.9949	0.9909	SE	patient1
patient1_SE_21	HLA-B15:01	KDFSLVEMEAAPFR	0.9912	0.9831	SE	patient1
patient1_SE_21	HLA-A26:01	DFSLVEMEAAPFRS	0.9203	0.9145	SE	patient1
patient1_SE_21	HLA-B27:05	DFSLVEMEAAPFRS	0.992	0.9706	SE	patient1
patient1_SE_21	HLA-B58:01	DFSLVEMEAAPFRS	0.9692	0.9938	SE	patient1
patient1_SE_21	HLA-B15:01	DFSLVEMEAAPFRS	0.9933	0.9921	SE	patient1
patient1_SE_21	HLA-B27:05	FSLVEMEAAPFRSK	0.9876	0.9049	SE	patient1
patient1_SE_21	HLA-B58:01	FSLVEMEAAPFRSK	0.9808	0.9795	SE	patient1
patient1_SE_21	HLA-B15:01	FSLVEMEAAPFRSK	0.9924	0.961	SE	patient1
patient1_SE_21	HLA-B58:01	SLVEMEAAPFRSKE	0.9796	0.976	SE	patient1
patient1_SE_21	HLA-B15:01	SLVEMEAAPFRSKE	0.9983	0.9663	SE	patient1
patient1_SE_21	HLA-B15:01	LVEMEAAPFRSKEP	0.9967	0.9077	SE	patient1
patient1_SE_21	HLA-B08:01	VEMEAAPFRSKEPC	0.9377	0.9319	SE	patient1
patient1_SE_21	HLA-B58:01	VEMEAAPFRSKEPC	0.9855	0.9546	SE	patient1
patient1_SE_21	HLA-B08:01	EMEAAPFRSKEPCM	0.9906	0.9156	SE	patient1
patient1_SE_21	HLA-B39:01	EMEAAPFRSKEPCM	0.9438	0.954	SE	patient1
patient1_SE_21	HLA-B58:01	EMEAAPFRSKEPCM	0.9916	0.9132	SE	patient1
patient1_SE_23	HLA-B58:01	RMDLDFFFRDW	0.9989	0.9523	SE	patient1
patient1_SE_23	HLA-B15:01	RMDLDFFFRDW	0.9495	0.9334	SE	patient1
patient1_SE_23	HLA-B39:01	LRMDLDFFFRDW	0.9329	0.9749	SE	patient1
patient1_SE_23	HLA-B58:01	LRMDLDFFFRDW	0.9992	0.9542	SE	patient1
patient1_SE_23	HLA-B15:01	LRMDLDFFFRDW	0.994	0.911	SE	patient1
patient1_SE_23	HLA-B58:01	RMDLDFFFRDWD	0.987	0.9448	SE	patient1
patient1_SE_23	HLA-B39:01	LRMDLDFFFRDWD	0.952	0.9685	SE	patient1
patient1_SE_23	HLA-B58:01	LRMDLDFFFRDWD	0.9936	0.9591	SE	patient1
patient1_SE_23	HLA-B58:01	RMDLDFFFRDWDL	0.9954	0.9521	SE	patient1
patient1_SE_23	HLA-B15:01	RMDLDFFFRDWDL	0.998	0.928	SE	patient1
patient1_SE_23	HLA-B58:01	SCVEEILRMDLDFDF	0.9965	0.9242	SE	patient1
patient1_SE_23	HLA-B58:01	CVEEILRMDLDFDF	0.9908	0.9378	SE	patient1
patient1_SE_23	HLA-B39:01	VEEILRMDLDFDFR	0.914	0.917	SE	patient1
patient1_SE_23	HLA-B08:01	EILRMDLDFFFRDW	0.9387	0.9226	SE	patient1
patient1_SE_23	HLA-B39:01	LRMDLDFFFRDWDL	0.9938	0.9827	SE	patient1

patient1_SE_23	HLA-B58:01	LRMDLDFFFRDWDL	0.9933	0.9665	SE	patient1
patient1_SE_23	HLA-B58:01	RMDLDFFFRDWDL	0.9797	0.9712	SE	patient1
patient1_SE_23	HLA-B15:01	RMDLDFFFRDWDL	0.9939	0.9342	SE	patient1
patient1_SE_25	HLA-B58:01	ASLGFETQL	0.9602	0.9761	SE	patient1
patient1_SE_25	HLA-B15:01	FQNLASLGFE	0.9936	0.9398	SE	patient1
patient1_SE_25	HLA-B27:05	LASLGFETQL	0.9962	0.9076	SE	patient1
patient1_SE_25	HLA-B58:01	LASLGFETQL	0.9366	0.9764	SE	patient1
patient1_SE_25	HLA-B15:01	LASLGFETQL	0.9494	0.9462	SE	patient1
patient1_SE_25	HLA-B27:05	NFQNLASLGFE	0.972	0.9003	SE	patient1
patient1_SE_25	HLA-B15:01	NFQNLASLGFE	0.9564	0.9558	SE	patient1
patient1_SE_25	HLA-B15:01	FQNLASLGFET	0.9872	0.963	SE	patient1
patient1_SE_25	HLA-B15:01	QNLASLGFETQ	0.979	0.9712	SE	patient1
patient1_SE_25	HLA-B15:01	NLASLGFETQL	0.9961	0.9405	SE	patient1
patient1_SE_25	HLA-B58:01	LENFQNLASLGF	0.9468	0.9177	SE	patient1
patient1_SE_25	HLA-B58:01	ENFQNLASLGFE	0.9688	0.9399	SE	patient1
patient1_SE_25	HLA-B27:05	NFQNLASLGFET	0.9813	0.9044	SE	patient1
patient1_SE_25	HLA-B15:01	FQNLASLGFETQ	0.9988	0.9647	SE	patient1
patient1_SE_25	HLA-B39:01	QNLASLGFETQL	0.9738	0.9924	SE	patient1
patient1_SE_25	HLA-B58:01	QNLASLGFETQL	0.9795	0.9903	SE	patient1
patient1_SE_25	HLA-B15:01	QNLASLGFETQL	0.9956	0.9649	SE	patient1
patient1_SE_25	HLA-B58:01	LASLGFETQLKT	0.9745	0.9464	SE	patient1
patient1_SE_25	HLA-B58:01	ASLGFETQLKTN	0.9861	0.9207	SE	patient1
patient1_SE_25	HLA-B58:01	SLGFETQLKTNE	0.9807	0.9652	SE	patient1
patient1_SE_25	HLA-B15:01	SLGFETQLKTNE	0.9995	0.9019	SE	patient1
patient1_SE_25	HLA-B58:01	LGFETQLKTNES	0.9888	0.933	SE	patient1
patient1_SE_25	HLA-B58:01	MLENFQNLASLGF	0.9424	0.943	SE	patient1
patient1_SE_25	HLA-B08:01	LENFQNLASLGFE	0.9461	0.914	SE	patient1
patient1_SE_25	HLA-B58:01	LENFQNLASLGFE	0.9677	0.9803	SE	patient1
patient1_SE_25	HLA-B08:01	ENFQNLASLGFET	0.9257	0.9255	SE	patient1
patient1_SE_25	HLA-B58:01	ENFQNLASLGFET	0.937	0.9679	SE	patient1
patient1_SE_25	HLA-B58:01	NFQNLASLGFETQ	0.921	0.9831	SE	patient1
patient1_SE_25	HLA-B15:01	NFQNLASLGFETQ	0.9862	0.97	SE	patient1
patient1_SE_25	HLA-B08:01	FQNLASLGFETQL	0.9392	0.986	SE	patient1
patient1_SE_25	HLA-B39:01	FQNLASLGFETQL	0.9961	0.9962	SE	patient1
patient1_SE_25	HLA-B58:01	FQNLASLGFETQL	0.9128	0.9901	SE	patient1
patient1_SE_25	HLA-B15:01	FQNLASLGFETQL	0.9999	0.9762	SE	patient1
patient1_SE_25	HLA-B58:01	QNLASLGFETQLK	0.9872	0.9572	SE	patient1
patient1_SE_25	HLA-B58:01	NLASLGFETQLKT	0.9707	0.9611	SE	patient1
patient1_SE_25	HLA-B15:01	NLASLGFETQLKT	0.998	0.9001	SE	patient1
patient1_SE_25	HLA-B58:01	LASLGFETQLKTN	0.9957	0.9152	SE	patient1
patient1_SE_25	HLA-B58:01	ASLGFETQLKTNE	0.9958	0.963	SE	patient1

patient1_SE_25	HLA-B58:01	SLGFETQLKTNES	0.9924	0.9695	SE	patient1
patient1_SE_25	HLA-B15:01	SLGFETQLKTNES	0.9996	0.9061	SE	patient1
patient1_SE_25	HLA-B58:01	LGFETQLKTNESV	0.9916	0.976	SE	patient1
patient1_SE_25	HLA-B58:01	VMLNFQNLASLGF	0.9788	0.9518	SE	patient1
patient1_SE_25	HLA-B58:01	MLENFQNLASLGFE	0.9258	0.9914	SE	patient1
patient1_SE_25	HLA-B15:01	MLENFQNLASLGFE	0.996	0.9638	SE	patient1
patient1_SE_25	HLA-A26:01	ENFQNLASLGFETQ	0.9157	0.9521	SE	patient1
patient1_SE_25	HLA-B58:01	ENFQNLASLGFETQ	0.944	0.9847	SE	patient1
patient1_SE_25	HLA-B15:01	ENFQNLASLGFETQ	0.9857	0.9626	SE	patient1
patient1_SE_25	HLA-B58:01	NFQNLASLGFETQL	0.9005	0.9677	SE	patient1
patient1_SE_25	HLA-B15:01	NFQNLASLGFETQL	0.9893	0.9703	SE	patient1
patient1_SE_25	HLA-B58:01	FQNLASLGFETQLK	0.9671	0.9771	SE	patient1
patient1_SE_25	HLA-B15:01	FQNLASLGFETQLK	0.9997	0.9071	SE	patient1
patient1_SE_25	HLA-A24:02	QNLASLGFETQLKT	0.9761	0.9234	SE	patient1
patient1_SE_25	HLA-B58:01	QNLASLGFETQLKT	0.9878	0.9891	SE	patient1
patient1_SE_25	HLA-B15:01	QNLASLGFETQLKT	0.9918	0.9747	SE	patient1
patient1_SE_25	HLA-B58:01	NLASLGFETQLKTN	0.9784	0.9635	SE	patient1
patient1_SE_25	HLA-B15:01	NLASLGFETQLKTN	0.9977	0.902	SE	patient1
patient1_SE_25	HLA-B58:01	LASLGFETQLKTNE	0.9906	0.9826	SE	patient1
patient1_SE_25	HLA-B15:01	LASLGFETQLKTNE	0.9976	0.9331	SE	patient1
patient1_SE_25	HLA-B58:01	ASLGFETQLKTNES	0.986	0.9633	SE	patient1
patient1_SE_25	HLA-B58:01	SLGFETQLKTNESV	0.9654	0.9908	SE	patient1
patient1_SE_25	HLA-B15:01	SLGFETQLKTNESV	0.9979	0.9687	SE	patient1
patient1_SE_25	HLA-A24:02	LGFETQLKTNESVA	0.9781	0.9429	SE	patient1
patient1_SE_25	HLA-B08:01	LGFETQLKTNESVA	0.9664	0.9205	SE	patient1
patient1_SE_25	HLA-B58:01	LGFETQLKTNESVA	0.991	0.9897	SE	patient1
patient1_SE_25	HLA-B15:01	LGFETQLKTNESVA	0.9985	0.9702	SE	patient1
patient1_SE_26	HLA-B27:05	WHGSCFRRSNS	0.9011	0.9212	SE	patient1
patient1_SE_26	HLA-B39:01	WHGSCFRRSNS	0.9059	0.9016	SE	patient1
patient1_SE_26	HLA-B15:01	TWHGSCFRRSNS	0.9635	0.9251	SE	patient1
patient1_SE_26	HLA-B27:05	WHGSCFRRSNSI	0.9706	0.923	SE	patient1
patient1_SE_26	HLA-B58:01	WHGSCFRRSNSI	0.9573	0.9029	SE	patient1
patient1_SE_26	HLA-B27:05	GSCFRRSNSISK	0.9748	0.9006	SE	patient1
patient1_SE_26	HLA-B58:01	TVNETWHGSCFRR	0.9719	0.9737	SE	patient1
patient1_SE_26	HLA-B15:01	TVNETWHGSCFRR	0.9821	0.9606	SE	patient1
patient1_SE_26	HLA-B58:01	VNETWHGSCFRRS	0.9941	0.919	SE	patient1
patient1_SE_26	HLA-B15:01	VNETWHGSCFRRS	0.9857	0.9062	SE	patient1
patient1_SE_26	HLA-B58:01	ETWHGSCFRRSNS	0.9108	0.9308	SE	patient1
patient1_SE_26	HLA-B58:01	TWHGSCFRRSNSI	0.9729	0.9385	SE	patient1
patient1_SE_26	HLA-B58:01	WHGSCFRRSNSIS	0.9686	0.9015	SE	patient1
patient1_SE_26	HLA-B58:01	RTVNETWHGSCFRR	0.9685	0.9623	SE	patient1

patient1_SE_26	HLA-B15:01	RTVNETWHGSCFRR	0.9383	0.9682	SE	patient1
patient1_SE_26	HLA-B58:01	TVNETWHGSCFRRS	0.9204	0.9682	SE	patient1
patient1_SE_26	HLA-B58:01	VNETWHGSCFRRSN	0.9217	0.9285	SE	patient1
patient1_SE_26	HLA-B15:01	VNETWHGSCFRRSN	0.9207	0.9184	SE	patient1
patient1_SE_26	HLA-B15:01	NETWHGSCFRRSNS	0.9398	0.9099	SE	patient1
patient1_SE_26	HLA-B58:01	ETWHGSCFRRSNSI	0.9047	0.923	SE	patient1
patient1_SE_26	HLA-B15:01	WHGSCFRRSNSISK	0.9493	0.9313	SE	patient1
patient1_SE_27	HLA-B27:05	SKFGPLCKYR	0.9991	0.9093	SE	patient1
patient1_SE_27	HLA-B27:05	YSKFGPLCKYR	0.9811	0.9195	SE	patient1
patient1_SE_27	HLA-B27:05	SKFGPLCKYRH	0.999	0.9088	SE	patient1
patient1_SE_27	HLA-B15:01	SKFGPLCKYRH	0.9158	0.918	SE	patient1
patient1_SE_27	HLA-B27:05	KFGPLCKYRHV	0.9335	0.9068	SE	patient1
patient1_SE_27	HLA-B15:01	ECYFYSKFGPLC	0.9888	0.926	SE	patient1
patient1_SE_27	HLA-B15:01	CYFYSKFGPLCK	0.9528	0.9251	SE	patient1
patient1_SE_27	HLA-B27:05	FYSKFGPLCKYR	0.9838	0.9561	SE	patient1
patient1_SE_27	HLA-B15:01	FYSKFGPLCKYR	0.9506	0.9758	SE	patient1
patient1_SE_27	HLA-B27:05	YSKFGPLCKYRH	0.9788	0.9251	SE	patient1
patient1_SE_27	HLA-B15:01	YSKFGPLCKYRH	0.9148	0.9419	SE	patient1
patient1_SE_27	HLA-B39:01	SKFGPLCKYRHV	0.9856	0.9604	SE	patient1
patient1_SE_27	HLA-B58:01	KFGPLCKYRHVP	0.9625	0.973	SE	patient1
patient1_SE_27	HLA-B27:05	FGPLCKYRHVPR	0.9918	0.9364	SE	patient1
patient1_SE_27	HLA-B15:01	FGPLCKYRHVPR	0.9087	0.9541	SE	patient1
patient1_SE_27	HLA-B58:01	RMPECYFYSKFGP	0.9442	0.9668	SE	patient1
patient1_SE_27	HLA-B15:01	RMPECYFYSKFGP	0.9956	0.9153	SE	patient1
patient1_SE_27	HLA-B08:01	PECYFYSKFGPLC	0.9082	0.9473	SE	patient1
patient1_SE_27	HLA-B27:05	PECYFYSKFGPLC	0.9975	0.901	SE	patient1
patient1_SE_27	HLA-B58:01	PECYFYSKFGPLC	0.9925	0.943	SE	patient1
patient1_SE_27	HLA-B15:01	PECYFYSKFGPLC	0.941	0.9502	SE	patient1
patient1_SE_27	HLA-B27:05	ECYFYSKFGPLCK	0.9975	0.9171	SE	patient1
patient1_SE_27	HLA-B15:01	ECYFYSKFGPLCK	0.9771	0.937	SE	patient1
patient1_SE_27	HLA-B15:01	CYFYSKFGPLCKY	0.9996	0.9092	SE	patient1
patient1_SE_27	HLA-B27:05	YFYSKFGPLCKYR	0.9957	0.9647	SE	patient1
patient1_SE_27	HLA-B58:01	YFYSKFGPLCKYR	0.9786	0.9749	SE	patient1
patient1_SE_27	HLA-B15:01	YFYSKFGPLCKYR	0.9943	0.9772	SE	patient1
patient1_SE_27	HLA-B27:05	FYSKFGPLCKYRH	0.987	0.9345	SE	patient1
patient1_SE_27	HLA-B15:01	FYSKFGPLCKYRH	0.9905	0.9756	SE	patient1
patient1_SE_27	HLA-B58:01	YSKFGPLCKYRHV	0.9337	0.9793	SE	patient1
patient1_SE_27	HLA-B15:01	YSKFGPLCKYRHV	0.9888	0.9531	SE	patient1
patient1_SE_27	HLA-B39:01	SKFGPLCKYRHVP	0.971	0.9817	SE	patient1
patient1_SE_27	HLA-B58:01	SKFGPLCKYRHVP	0.9738	0.9814	SE	patient1
patient1_SE_27	HLA-B15:01	SKFGPLCKYRHVP	0.9817	0.9336	SE	patient1

patient1_SE_27	HLA-A24:02	KFGPLCKYRHVPR	0.9811	0.9558	SE	patient1
patient1_SE_27	HLA-B08:01	KFGPLCKYRHVPR	0.9037	0.9576	SE	patient1
patient1_SE_27	HLA-B27:05	KFGPLCKYRHVPR	0.9964	0.9359	SE	patient1
patient1_SE_27	HLA-B58:01	KFGPLCKYRHVPR	0.9517	0.9897	SE	patient1
patient1_SE_27	HLA-B15:01	KFGPLCKYRHVPR	0.9588	0.9772	SE	patient1
patient1_SE_27	HLA-A24:02	FGPLCKYRHVPRI	0.9772	0.9063	SE	patient1
patient1_SE_27	HLA-B08:01	FGPLCKYRHVPRI	0.9775	0.9303	SE	patient1
patient1_SE_27	HLA-B27:05	FGPLCKYRHVPRI	0.9935	0.9535	SE	patient1
patient1_SE_27	HLA-B58:01	FGPLCKYRHVPRI	0.9642	0.9803	SE	patient1
patient1_SE_27	HLA-B15:01	FGPLCKYRHVPRI	0.9791	0.9658	SE	patient1
patient1_SE_27	HLA-B39:01	TRMPECYFYSKFGP	0.9362	0.9826	SE	patient1
patient1_SE_27	HLA-B58:01	TRMPECYFYSKFGP	0.9199	0.9677	SE	patient1
patient1_SE_27	HLA-B08:01	RMPECYFYSKFGPL	0.9731	0.9039	SE	patient1
patient1_SE_27	HLA-B58:01	RMPECYFYSKFGPL	0.9629	0.9775	SE	patient1
patient1_SE_27	HLA-B15:01	RMPECYFYSKFGPL	0.9971	0.9502	SE	patient1
patient1_SE_27	HLA-A24:02	MPECYFYSKFGPLC	0.9514	0.9472	SE	patient1
patient1_SE_27	HLA-B58:01	MPECYFYSKFGPLC	0.9151	0.9941	SE	patient1
patient1_SE_27	HLA-A24:02	PECYFYSKFGPLCK	0.9639	0.9249	SE	patient1
patient1_SE_27	HLA-B27:05	PECYFYSKFGPLCK	0.9405	0.9285	SE	patient1
patient1_SE_27	HLA-B58:01	PECYFYSKFGPLCK	0.9173	0.972	SE	patient1
patient1_SE_27	HLA-B15:01	PECYFYSKFGPLCK	0.9867	0.9704	SE	patient1
patient1_SE_27	HLA-B15:01	ECYFYSKFGPLCKY	0.9979	0.9203	SE	patient1
patient1_SE_27	HLA-B08:01	CYFYSKFGPLCKYR	0.965	0.9103	SE	patient1
patient1_SE_27	HLA-B27:05	CYFYSKFGPLCKYR	0.986	0.9473	SE	patient1
patient1_SE_27	HLA-B58:01	CYFYSKFGPLCKYR	0.9418	0.9554	SE	patient1
patient1_SE_27	HLA-B15:01	CYFYSKFGPLCKYR	0.9851	0.9757	SE	patient1
patient1_SE_27	HLA-B08:01	YFYSKFGPLCKYRH	0.9668	0.9044	SE	patient1
patient1_SE_27	HLA-B27:05	YFYSKFGPLCKYRH	0.9603	0.976	SE	patient1
patient1_SE_27	HLA-B58:01	YFYSKFGPLCKYRH	0.9214	0.9879	SE	patient1
patient1_SE_27	HLA-B15:01	YFYSKFGPLCKYRH	0.9919	0.9869	SE	patient1
patient1_SE_27	HLA-B27:05	FYSKFGPLCKYRHV	0.9447	0.9553	SE	patient1
patient1_SE_27	HLA-B58:01	YSKFGPLCKYRHVP	0.9256	0.9881	SE	patient1
patient1_SE_27	HLA-B15:01	YSKFGPLCKYRHVP	0.9356	0.9693	SE	patient1
patient1_SE_27	HLA-B15:01	SKFGPLCKYRHVPR	0.9564	0.964	SE	patient1
patient1_SE_27	HLA-A24:02	KFGPLCKYRHVPRI	0.9968	0.9683	SE	patient1
patient1_SE_27	HLA-B08:01	KFGPLCKYRHVPRI	0.9364	0.9749	SE	patient1
patient1_SE_27	HLA-B27:05	KFGPLCKYRHVPRI	0.9921	0.9474	SE	patient1
patient1_SE_27	HLA-B58:01	KFGPLCKYRHVPRI	0.9412	0.9931	SE	patient1
patient1_SE_27	HLA-B15:01	KFGPLCKYRHVPRI	0.9511	0.9844	SE	patient1
patient1_SE_27	HLA-A24:02	FGPLCKYRHVPRIM	0.9801	0.9693	SE	patient1
patient1_SE_27	HLA-B08:01	FGPLCKYRHVPRIM	0.9832	0.9316	SE	patient1

patient1_SE_27	HLA-B58:01	FGPLCKYRHVPRIM	0.9672	0.9634	SE	patient1
patient1_SE_27	HLA-B15:01	FGPLCKYRHVPRIM	0.9859	0.9354	SE	patient1
patient1_SE_28	HLA-B39:01	SHLSLMKCDL	0.9925	0.9132	SE	patient1
patient1_SE_28	HLA-B15:01	HLSLMKCDLRA	0.9058	0.9219	SE	patient1
patient1_SE_28	HLA-B39:01	HEPTCQISHLSL	0.9856	0.9008	SE	patient1
patient1_SE_28	HLA-B39:01	SHLSLMKCDLRA	0.9993	0.9538	SE	patient1
patient1_SE_28	HLA-B15:01	SHLSLMKCDLRA	0.998	0.9299	SE	patient1
patient1_SE_28	HLA-B15:01	HLSLMKCDLRAS	0.9971	0.9099	SE	patient1
patient1_SE_28	HLA-B39:01	LSLMKCDLRASE	0.9063	0.9588	SE	patient1
patient1_SE_28	HLA-B39:01	LHEPTCQISHLSL	0.9939	0.9679	SE	patient1
patient1_SE_28	HLA-B39:01	HEPTCQISHLSLM	0.9766	0.9494	SE	patient1
patient1_SE_28	HLA-B08:01	CQISHLSLMKCDL	0.9857	0.9134	SE	patient1
patient1_SE_28	HLA-B39:01	CQISHLSLMKCDL	0.9913	0.9454	SE	patient1
patient1_SE_28	HLA-B08:01	QISHLSLMKCDLR	0.9585	0.9117	SE	patient1
patient1_SE_28	HLA-B58:01	QISHLSLMKCDLR	0.977	0.9577	SE	patient1
patient1_SE_28	HLA-B15:01	QISHLSLMKCDLR	0.9944	0.9242	SE	patient1
patient1_SE_28	HLA-B58:01	ISHLSLMKCDLRA	0.994	0.9249	SE	patient1
patient1_SE_28	HLA-B15:01	ISHLSLMKCDLRA	0.9985	0.9588	SE	patient1
patient1_SE_28	HLA-B39:01	SHLSLMKCDLRAS	0.9957	0.9419	SE	patient1
patient1_SE_28	HLA-B15:01	SHLSLMKCDLRAS	0.9995	0.9216	SE	patient1
patient1_SE_28	HLA-B58:01	HLSLMKCDLRASE	0.9893	0.9028	SE	patient1
patient1_SE_28	HLA-B15:01	HLSLMKCDLRASE	0.9995	0.9419	SE	patient1
patient1_SE_28	HLA-A24:02	LSLMKCDLRASEC	0.998	0.9121	SE	patient1
patient1_SE_28	HLA-B08:01	LSLMKCDLRASEC	0.9899	0.9452	SE	patient1
patient1_SE_28	HLA-B58:01	LSLMKCDLRASEC	0.9958	0.952	SE	patient1
patient1_SE_28	HLA-B15:01	LSLMKCDLRASEC	0.9989	0.9289	SE	patient1
patient1_SE_28	HLA-A24:02	ILHEPTCQISHLSL	0.9881	0.95	SE	patient1
patient1_SE_28	HLA-B08:01	ILHEPTCQISHLSL	0.9204	0.9005	SE	patient1
patient1_SE_28	HLA-B58:01	ILHEPTCQISHLSL	0.9082	0.9431	SE	patient1
patient1_SE_28	HLA-B15:01	ILHEPTCQISHLSL	0.9996	0.9514	SE	patient1
patient1_SE_28	HLA-B39:01	LHEPTCQISHLSLM	0.9869	0.9863	SE	patient1
patient1_SE_28	HLA-B58:01	LHEPTCQISHLSLM	0.991	0.9388	SE	patient1
patient1_SE_28	HLA-B15:01	LHEPTCQISHLSLM	0.9912	0.9202	SE	patient1
patient1_SE_28	HLA-A24:02	PTCQISHLSLMKCD	0.9577	0.9619	SE	patient1
patient1_SE_28	HLA-A24:02	TCQISHLSLMKCDL	0.9931	0.9229	SE	patient1
patient1_SE_28	HLA-B08:01	TCQISHLSLMKCDL	0.9359	0.9466	SE	patient1
patient1_SE_28	HLA-B39:01	TCQISHLSLMKCDL	0.9594	0.9751	SE	patient1
patient1_SE_28	HLA-B58:01	TCQISHLSLMKCDL	0.9931	0.9345	SE	patient1
patient1_SE_28	HLA-A24:02	CQISHLSLMKCDLR	0.9838	0.9321	SE	patient1
patient1_SE_28	HLA-B39:01	CQISHLSLMKCDLR	0.9119	0.9811	SE	patient1
patient1_SE_28	HLA-B58:01	CQISHLSLMKCDLR	0.9712	0.9594	SE	patient1

patient1_SE_28	HLA-B15:01	CQISHLSLMKCDLR	0.9981	0.9165	SE	patient1
patient1_SE_28	HLA-A24:02	QISHLSLMKCDLRA	0.9779	0.9429	SE	patient1
patient1_SE_28	HLA-B08:01	QISHLSLMKCDLRA	0.934	0.9762	SE	patient1
patient1_SE_28	HLA-B58:01	QISHLSLMKCDLRA	0.973	0.9766	SE	patient1
patient1_SE_28	HLA-B15:01	QISHLSLMKCDLRA	0.9901	0.9691	SE	patient1
patient1_SE_28	HLA-B58:01	ISHLSLMKCDLRAS	0.9686	0.9432	SE	patient1
patient1_SE_28	HLA-B15:01	ISHLSLMKCDLRAS	0.9822	0.9459	SE	patient1
patient1_SE_28	HLA-B39:01	SHLSLMKCDLRASE	0.9766	0.9562	SE	patient1
patient1_SE_28	HLA-B58:01	SHLSLMKCDLRASE	0.9857	0.9312	SE	patient1
patient1_SE_28	HLA-B15:01	SHLSLMKCDLRASE	0.9907	0.927	SE	patient1
patient1_SE_28	HLA-A24:02	HLSLMKCDLRASEC	0.9701	0.937	SE	patient1
patient1_SE_28	HLA-B58:01	HLSLMKCDLRASEC	0.9355	0.9775	SE	patient1
patient1_SE_28	HLA-B15:01	HLSLMKCDLRASEC	0.962	0.9596	SE	patient1
patient1_SE_28	HLA-A24:02	LSLMKCDLRASECE	0.9694	0.9443	SE	patient1
patient1_SE_28	HLA-B08:01	LSLMKCDLRASECE	0.9007	0.9511	SE	patient1
patient1_SE_28	HLA-B58:01	LSLMKCDLRASECE	0.9512	0.9688	SE	patient1
patient1_SE_30	HLA-B39:01	DAVKETSSVKQR	0.9405	0.925	SE	patient1
patient1_SE_30	HLA-B58:01	VKETSSVKQRWN	0.9869	0.9415	SE	patient1
patient1_SE_30	HLA-A24:02	EDAVKETSSVKQR	0.9991	0.9163	SE	patient1
patient1_SE_30	HLA-A26:01	EDAVKETSSVKQR	0.9981	0.9517	SE	patient1
patient1_SE_30	HLA-B39:01	EDAVKETSSVKQR	0.9711	0.9057	SE	patient1
patient1_SE_30	HLA-A24:02	DAVKETSSVKQRW	0.9988	0.9477	SE	patient1
patient1_SE_30	HLA-A26:01	DAVKETSSVKQRW	0.9648	0.9587	SE	patient1
patient1_SE_30	HLA-B40:01	DAVKETSSVKQRW	0.9389	0.9034	SE	patient1
patient1_SE_30	HLA-A24:02	AVKETSSVKQRWN	0.9818	0.9071	SE	patient1
patient1_SE_30	HLA-B58:01	AVKETSSVKQRWN	0.9789	0.9118	SE	patient1
patient1_SE_30	HLA-B39:01	VKETSSVKQRWNH	0.9248	0.9329	SE	patient1
patient1_SE_30	HLA-B15:01	VKETSSVKQRWNH	0.9836	0.9366	SE	patient1
patient1_SE_30	HLA-B39:01	KETSSVKQRWNHV	0.9221	0.9469	SE	patient1
patient1_SE_30	HLA-B58:01	KETSSVKQRWNHV	0.9669	0.9146	SE	patient1
patient1_SE_30	HLA-B58:01	KQRWNHVTTTTKR	0.9575	0.9455	SE	patient1
patient1_SE_30	HLA-A24:02	LEDAVKETSSVKQR	0.9982	0.9791	SE	patient1
patient1_SE_30	HLA-A26:01	LEDAVKETSSVKQR	0.9578	0.9729	SE	patient1
patient1_SE_30	HLA-B08:01	LEDAVKETSSVKQR	0.9813	0.9063	SE	patient1
patient1_SE_30	HLA-B39:01	LEDAVKETSSVKQR	0.9788	0.9859	SE	patient1
patient1_SE_30	HLA-B40:01	LEDAVKETSSVKQR	0.9988	0.935	SE	patient1
patient1_SE_30	HLA-B58:01	LEDAVKETSSVKQR	0.9976	0.9562	SE	patient1
patient1_SE_30	HLA-B15:01	LEDAVKETSSVKQR	0.9993	0.9169	SE	patient1
patient1_SE_30	HLA-A24:02	EDAVKETSSVKQRW	0.9929	0.9667	SE	patient1
patient1_SE_30	HLA-A26:01	EDAVKETSSVKQRW	0.9616	0.9695	SE	patient1
patient1_SE_30	HLA-B40:01	EDAVKETSSVKQRW	0.9094	0.9048	SE	patient1

patient1_SE_30	HLA-A24:02	DAVKETSSVKQRWN	0.9649	0.9555	SE	patient1
patient1_SE_30	HLA-A26:01	DAVKETSSVKQRWN	0.9337	0.9683	SE	patient1
patient1_SE_30	HLA-B58:01	DAVKETSSVKQRWN	0.9891	0.9166	SE	patient1
patient1_SE_30	HLA-A24:02	AVKETSSVKQRWNH	0.9262	0.9211	SE	patient1
patient1_SE_30	HLA-A24:02	VKETSSVKQRWNHV	0.9578	0.911	SE	patient1
patient1_SE_30	HLA-A24:02	KETSSVKQRWNHVT	0.9007	0.9624	SE	patient1
patient1_SE_30	HLA-B40:01	KETSSVKQRWNHVT	0.985	0.9269	SE	patient1
patient1_SE_30	HLA-B58:01	KETSSVKQRWNHVT	0.9019	0.9483	SE	patient1
patient1_SE_30	HLA-B15:01	KETSSVKQRWNHVT	0.918	0.9053	SE	patient1
patient1_SE_30	HLA-A26:01	ETSSVKQRWNHVTT	0.9413	0.9279	SE	patient1
patient1_SE_34	HLA-B08:01	NLMKCVFVTV	0.9093	0.9208	SE	patient1
patient1_SE_34	HLA-B27:05	NLMKCVFVTV	0.9202	0.9284	SE	patient1
patient1_SE_34	HLA-B15:01	LMKCVFVTVG	0.9789	0.9298	SE	patient1
patient1_SE_34	HLA-B27:05	ANLMKCVFVTV	0.9822	0.915	SE	patient1
patient1_SE_34	HLA-B08:01	NLMKCVFVTVG	0.9048	0.9718	SE	patient1
patient1_SE_34	HLA-B15:01	NLMKCVFVTVG	0.9552	0.9273	SE	patient1
patient1_SE_34	HLA-B15:01	LMKCVFVTVGT	0.9641	0.9182	SE	patient1
patient1_SE_34	HLA-B58:01	STTASTANLMKC	0.9649	0.9276	SE	patient1
patient1_SE_34	HLA-B58:01	TTASTANLMKCV	0.9572	0.9656	SE	patient1
patient1_SE_34	HLA-B58:01	TASTANLMKCVF	0.9917	0.9338	SE	patient1
patient1_SE_34	HLA-B15:01	TASTANLMKCVF	0.999	0.9383	SE	patient1
patient1_SE_34	HLA-B58:01	ASTANLMKCVFV	0.964	0.9202	SE	patient1
patient1_SE_34	HLA-B58:01	STANLMKCVFVT	0.9154	0.9314	SE	patient1
patient1_SE_34	HLA-B08:01	TANLMKCVFVTV	0.9746	0.9198	SE	patient1
patient1_SE_34	HLA-B58:01	TANLMKCVFVTV	0.9713	0.97	SE	patient1
patient1_SE_34	HLA-B08:01	ANLMKCVFVTVG	0.9867	0.9558	SE	patient1
patient1_SE_34	HLA-B58:01	ANLMKCVFVTVG	0.9799	0.9658	SE	patient1
patient1_SE_34	HLA-B15:01	ANLMKCVFVTVG	0.9957	0.9215	SE	patient1
patient1_SE_34	HLA-B15:01	NLMKCVFVTVGT	0.968	0.929	SE	patient1
patient1_SE_34	HLA-B08:01	LMKCVFVTVGTT	0.9302	0.9302	SE	patient1
patient1_SE_34	HLA-B15:01	LMKCVFVTVGTT	0.998	0.9224	SE	patient1
patient1_SE_34	HLA-B15:01	VYSTTASTANLMK	0.9775	0.9161	SE	patient1
patient1_SE_34	HLA-B58:01	YSTTASTANLMKC	0.995	0.9295	SE	patient1
patient1_SE_34	HLA-B58:01	STTASTANLMKCV	0.9877	0.9584	SE	patient1
patient1_SE_34	HLA-B15:01	STTASTANLMKCV	0.9589	0.916	SE	patient1
patient1_SE_34	HLA-B58:01	TTASTANLMKCVF	0.9971	0.9652	SE	patient1
patient1_SE_34	HLA-B15:01	TTASTANLMKCVF	0.999	0.9385	SE	patient1
patient1_SE_34	HLA-B58:01	TASTANLMKCVFV	0.9841	0.968	SE	patient1
patient1_SE_34	HLA-B15:01	TASTANLMKCVFV	0.9711	0.9602	SE	patient1
patient1_SE_34	HLA-B58:01	ASTANLMKCVFVT	0.9896	0.9455	SE	patient1
patient1_SE_34	HLA-B15:01	ASTANLMKCVFVT	0.971	0.9473	SE	patient1

patient1_SE_34	HLA-B58:01	STANLMKCVFVTV	0.994	0.9702	SE	patient1
patient1_SE_34	HLA-B15:01	STANLMKCVFVTV	0.9033	0.956	SE	patient1
patient1_SE_34	HLA-B08:01	TANLMKCVFVTVG	0.9724	0.9181	SE	patient1
patient1_SE_34	HLA-B58:01	TANLMKCVFVTVG	0.989	0.9639	SE	patient1
patient1_SE_34	HLA-B15:01	TANLMKCVFVTVG	0.9896	0.9008	SE	patient1
patient1_SE_34	HLA-B08:01	ANLMKCVFVTVGT	0.9594	0.9498	SE	patient1
patient1_SE_34	HLA-B58:01	ANLMKCVFVTVGT	0.9665	0.9726	SE	patient1
patient1_SE_34	HLA-B15:01	ANLMKCVFVTVGT	0.9546	0.9251	SE	patient1
patient1_SE_34	HLA-A24:02	NLMKCVFVTVGTT	0.9422	0.9256	SE	patient1
patient1_SE_34	HLA-B08:01	NLMKCVFVTVGTT	0.9594	0.9714	SE	patient1
patient1_SE_34	HLA-B15:01	NLMKCVFVTVGTT	0.9931	0.9366	SE	patient1
patient1_SE_34	HLA-B08:01	LMKCVFVTVGTTS	0.9699	0.9347	SE	patient1
patient1_SE_34	HLA-B15:01	LMKCVFVTVGTTS	0.9996	0.931	SE	patient1
patient1_SE_34	HLA-B58:01	GVYSTTASTANLMK	0.9102	0.9656	SE	patient1
patient1_SE_34	HLA-B15:01	GVYSTTASTANLMK	0.9927	0.9391	SE	patient1
patient1_SE_34	HLA-B58:01	VYSTTASTANLMKC	0.9475	0.9273	SE	patient1
patient1_SE_34	HLA-B58:01	YSTTASTANLMKCV	0.9958	0.9063	SE	patient1
patient1_SE_34	HLA-B58:01	STTASTANLMKCVF	0.993	0.9666	SE	patient1
patient1_SE_34	HLA-B15:01	STTASTANLMKCVF	0.9921	0.9567	SE	patient1
patient1_SE_34	HLA-B58:01	TTASTANLMKCVFV	0.991	0.9792	SE	patient1
patient1_SE_34	HLA-B15:01	TTASTANLMKCVFV	0.9803	0.9628	SE	patient1
patient1_SE_34	HLA-B58:01	TASTANLMKCVFVT	0.9838	0.9754	SE	patient1
patient1_SE_34	HLA-B15:01	TASTANLMKCVFVT	0.9032	0.9578	SE	patient1
patient1_SE_34	HLA-B58:01	ASTANLMKCVFVTV	0.9945	0.9738	SE	patient1
patient1_SE_34	HLA-B15:01	ASTANLMKCVFVTV	0.9564	0.9628	SE	patient1
patient1_SE_34	HLA-A24:02	STANLMKCVFVTVG	0.9751	0.9338	SE	patient1
patient1_SE_34	HLA-B58:01	STANLMKCVFVTVG	0.9674	0.9566	SE	patient1
patient1_SE_34	HLA-B15:01	STANLMKCVFVTVG	0.9598	0.9152	SE	patient1
patient1_SE_34	HLA-A24:02	TANLMKCVFVTVGT	0.9668	0.9308	SE	patient1
patient1_SE_34	HLA-B58:01	TANLMKCVFVTVGT	0.9604	0.9629	SE	patient1
patient1_SE_34	HLA-A24:02	ANLMKCVFVTVGTT	0.9352	0.9223	SE	patient1
patient1_SE_34	HLA-A24:02	NLMKCVFVTVGTTS	0.9463	0.9816	SE	patient1
patient1_SE_34	HLA-B15:01	NLMKCVFVTVGTTS	0.9618	0.9264	SE	patient1
patient1_SE_34	HLA-A24:02	LMKCVFVTVGTTSF	0.9978	0.9329	SE	patient1
patient1_SE_34	HLA-B08:01	LMKCVFVTVGTTSF	0.9648	0.9431	SE	patient1
patient1_SE_34	HLA-B58:01	LMKCVFVTVGTTSF	0.9293	0.968	SE	patient1
patient1_SE_34	HLA-B15:01	LMKCVFVTVGTTSF	0.9998	0.9315	SE	patient1
patient1_SE_35	HLA-B58:01	TASTANLMF	0.9684	0.9533	SE	patient1
patient1_SE_35	HLA-B58:01	TTASTANLMF	0.9909	0.959	SE	patient1
patient1_SE_35	HLA-B15:01	TTASTANLMF	0.9927	0.9097	SE	patient1
patient1_SE_35	HLA-B15:01	ANLMFTGAGS	0.9488	0.9203	SE	patient1

patient1_SE_35	HLA-B15:01	NLMFTGAGSC	0.9508	0.9189	SE	patient1
patient1_SE_35	HLA-B15:01	LMFTGAGSCL	0.9931	0.919	SE	patient1
patient1_SE_35	HLA-B58:01	STTASTANLMF	0.9873	0.9364	SE	patient1
patient1_SE_35	HLA-B15:01	STTASTANLMF	0.9823	0.9079	SE	patient1
patient1_SE_35	HLA-B15:01	TASTANLMFTG	0.9472	0.9613	SE	patient1
patient1_SE_35	HLA-B15:01	STANLMFTGAG	0.9626	0.9348	SE	patient1
patient1_SE_35	HLA-B58:01	ANLMFTGAGSC	0.9537	0.9584	SE	patient1
patient1_SE_35	HLA-B15:01	ANLMFTGAGSC	0.9673	0.9165	SE	patient1
patient1_SE_35	HLA-B15:01	NLMFTGAGSCL	0.9748	0.9239	SE	patient1
patient1_SE_35	HLA-B15:01	LMFTGAGSCLE	0.9978	0.9229	SE	patient1
patient1_SE_35	HLA-B27:05	YSTTASTANLMF	0.983	0.9026	SE	patient1
patient1_SE_35	HLA-B58:01	YSTTASTANLMF	0.9965	0.903	SE	patient1
patient1_SE_35	HLA-B58:01	STTASTANLMFT	0.904	0.9373	SE	patient1
patient1_SE_35	HLA-B58:01	TTASTANLMFTG	0.9786	0.982	SE	patient1
patient1_SE_35	HLA-B15:01	TTASTANLMFTG	0.9481	0.9631	SE	patient1
patient1_SE_35	HLA-B58:01	TASTANLMFTGA	0.972	0.9851	SE	patient1
patient1_SE_35	HLA-B15:01	TASTANLMFTGA	0.9585	0.9628	SE	patient1
patient1_SE_35	HLA-B58:01	ASTANLMFTGAG	0.9896	0.9471	SE	patient1
patient1_SE_35	HLA-B15:01	ASTANLMFTGAG	0.9961	0.9175	SE	patient1
patient1_SE_35	HLA-B58:01	STANLMFTGAGS	0.9649	0.9338	SE	patient1
patient1_SE_35	HLA-B08:01	ANLMFTGAGSCL	0.9394	0.9594	SE	patient1
patient1_SE_35	HLA-B39:01	ANLMFTGAGSCL	0.985	0.929	SE	patient1
patient1_SE_35	HLA-B58:01	ANLMFTGAGSCL	0.9742	0.9565	SE	patient1
patient1_SE_35	HLA-B15:01	ANLMFTGAGSCL	0.9916	0.93	SE	patient1
patient1_SE_35	HLA-B08:01	NLMFTGAGSCLE	0.9501	0.968	SE	patient1
patient1_SE_35	HLA-B58:01	NLMFTGAGSCLE	0.9174	0.9606	SE	patient1
patient1_SE_35	HLA-B15:01	NLMFTGAGSCLE	0.9953	0.9204	SE	patient1
patient1_SE_35	HLA-B58:01	LMFTGAGSCLET	0.9172	0.954	SE	patient1
patient1_SE_35	HLA-B15:01	LMFTGAGSCLET	0.999	0.9432	SE	patient1
patient1_SE_35	HLA-B58:01	VYSTTASTANLMF	0.9464	0.9265	SE	patient1
patient1_SE_35	HLA-B15:01	VYSTTASTANLMF	0.9977	0.9136	SE	patient1
patient1_SE_35	HLA-B27:05	YSTTASTANLMFT	0.975	0.9027	SE	patient1
patient1_SE_35	HLA-B58:01	YSTTASTANLMFT	0.9799	0.9127	SE	patient1
patient1_SE_35	HLA-B15:01	YSTTASTANLMFT	0.9866	0.9242	SE	patient1
patient1_SE_35	HLA-B58:01	STTASTANLMFTG	0.9904	0.9793	SE	patient1
patient1_SE_35	HLA-B15:01	STTASTANLMFTG	0.9653	0.9701	SE	patient1
patient1_SE_35	HLA-B58:01	TTASTANLMFTGA	0.991	0.9669	SE	patient1
patient1_SE_35	HLA-B15:01	TTASTANLMFTGA	0.9709	0.9472	SE	patient1
patient1_SE_35	HLA-B08:01	TANLMFTGAGSCL	0.9622	0.9284	SE	patient1
patient1_SE_35	HLA-B39:01	TANLMFTGAGSCL	0.9407	0.9072	SE	patient1
patient1_SE_35	HLA-B08:01	ANLMFTGAGSCLE	0.9518	0.9721	SE	patient1

patient1_SE_35	HLA-B58:01	ANLMFTGAGSCLE	0.9817	0.9076	SE	patient1
patient1_SE_35	HLA-B15:01	ANLMFTGAGSCLE	0.9981	0.9368	SE	patient1
patient1_SE_35	HLA-B15:01	NLMFTGAGSCLET	0.9977	0.9279	SE	patient1
patient1_SE_35	HLA-B08:01	LMFTGAGSCLETL	0.961	0.9436	SE	patient1
patient1_SE_35	HLA-B58:01	LMFTGAGSCLETL	0.9332	0.9123	SE	patient1
patient1_SE_35	HLA-B15:01	LMFTGAGSCLETL	0.9999	0.9448	SE	patient1
patient1_SE_35	HLA-B58:01	GVYSTTASTANLMF	0.9772	0.9646	SE	patient1
patient1_SE_35	HLA-B15:01	GVYSTTASTANLMF	0.999	0.9333	SE	patient1
patient1_SE_35	HLA-B15:01	VYSTTASTANLMFT	0.9069	0.9263	SE	patient1
patient1_SE_35	HLA-B58:01	YSTTASTANLMFTG	0.9858	0.9257	SE	patient1
patient1_SE_35	HLA-B15:01	YSTTASTANLMFTG	0.9828	0.9273	SE	patient1
patient1_SE_35	HLA-B58:01	STTASTANLMFTGA	0.9857	0.9345	SE	patient1
patient1_SE_35	HLA-B15:01	STTASTANLMFTGA	0.9373	0.9416	SE	patient1
patient1_SE_35	HLA-B15:01	ANLMFTGAGSCLET	0.9117	0.937	SE	patient1
patient1_SE_35	HLA-B15:01	NLMFTGAGSCLETL	0.9976	0.9423	SE	patient1
patient1_SE_35	HLA-A24:02	LMFTGAGSCLETLE	0.9847	0.9038	SE	patient1
patient1_SE_35	HLA-B15:01	LMFTGAGSCLETLE	0.9971	0.9456	SE	patient1
patient1_SE_36	HLA-B27:05	ANLMNNHQLE	0.9905	0.9277	SE	patient1
patient1_SE_36	HLA-B27:05	NLMNNHQLEL	0.9839	0.9043	SE	patient1
patient1_SE_36	HLA-B15:01	LMNNHQLELA	0.959	0.9016	SE	patient1
patient1_SE_36	HLA-B15:01	TTASTANLMNN	0.9393	0.9159	SE	patient1
patient1_SE_36	HLA-B27:05	TASTANLMNNH	0.9397	0.9287	SE	patient1
patient1_SE_36	HLA-B15:01	TASTANLMNNH	0.9547	0.9164	SE	patient1
patient1_SE_36	HLA-B27:05	STANLMNNHQL	0.9967	0.903	SE	patient1
patient1_SE_36	HLA-B39:01	ANLMNNHQLEL	0.9753	0.9721	SE	patient1
patient1_SE_36	HLA-B15:01	NLMNNHQLELA	0.9581	0.9016	SE	patient1
patient1_SE_36	HLA-B27:05	YSTTASTANLMN	0.9782	0.9155	SE	patient1
patient1_SE_36	HLA-B58:01	STTASTANLMNN	0.9153	0.936	SE	patient1
patient1_SE_36	HLA-B15:01	STTASTANLMNN	0.9735	0.9093	SE	patient1
patient1_SE_36	HLA-B15:01	TTASTANLMNNH	0.9869	0.9274	SE	patient1
patient1_SE_36	HLA-B58:01	TASTANLMNNHQ	0.9401	0.9859	SE	patient1
patient1_SE_36	HLA-B15:01	TASTANLMNNHQ	0.9917	0.9448	SE	patient1
patient1_SE_36	HLA-B58:01	ASTANLMNNHQL	0.9983	0.9214	SE	patient1
patient1_SE_36	HLA-B58:01	STANLMNNHQLE	0.968	0.9433	SE	patient1
patient1_SE_36	HLA-B39:01	TANLMNNHQLEL	0.944	0.9562	SE	patient1
patient1_SE_36	HLA-B58:01	TANLMNNHQLEL	0.9933	0.9153	SE	patient1
patient1_SE_36	HLA-B58:01	ANLMNNHQLELA	0.9557	0.9673	SE	patient1
patient1_SE_36	HLA-B15:01	VYSTTASTANLMN	0.997	0.9207	SE	patient1
patient1_SE_36	HLA-B27:05	YSTTASTANLMNN	0.9938	0.9224	SE	patient1
patient1_SE_36	HLA-B58:01	YSTTASTANLMNN	0.9805	0.911	SE	patient1
patient1_SE_36	HLA-B15:01	YSTTASTANLMNN	0.997	0.9171	SE	patient1

patient1_SE_36	HLA-B27:05	STTASTANLMNNH	0.9668	0.9044	SE	patient1
patient1_SE_36	HLA-B58:01	STTASTANLMNNH	0.9033	0.9331	SE	patient1
patient1_SE_36	HLA-B15:01	STTASTANLMNNH	0.9878	0.9331	SE	patient1
patient1_SE_36	HLA-B58:01	TTASTANLMNNHQ	0.95	0.9863	SE	patient1
patient1_SE_36	HLA-B15:01	TTASTANLMNNHQ	0.9929	0.9454	SE	patient1
patient1_SE_36	HLA-B39:01	TASTANLMNNHQL	0.9516	0.9435	SE	patient1
patient1_SE_36	HLA-B58:01	TASTANLMNNHQL	0.9977	0.9799	SE	patient1
patient1_SE_36	HLA-B15:01	TASTANLMNNHQL	0.9991	0.9203	SE	patient1
patient1_SE_36	HLA-B58:01	ASTANLMNNHQLE	0.9962	0.9686	SE	patient1
patient1_SE_36	HLA-B39:01	STANLMNNHQLEL	0.902	0.9587	SE	patient1
patient1_SE_36	HLA-B58:01	STANLMNNHQLEL	0.9971	0.9435	SE	patient1
patient1_SE_36	HLA-B15:01	STANLMNNHQLEL	0.9992	0.9138	SE	patient1
patient1_SE_36	HLA-B58:01	TANLMNNHQLELA	0.9949	0.9502	SE	patient1
patient1_SE_36	HLA-B58:01	ANLMNNHQLELAK	0.9861	0.9322	SE	patient1
patient1_SE_36	HLA-B08:01	NLMNNHQLELAKQ	0.961	0.9179	SE	patient1
patient1_SE_36	HLA-B58:01	NLMNNHQLELAKQ	0.9555	0.9223	SE	patient1
patient1_SE_36	HLA-B15:01	NLMNNHQLELAKQ	0.9995	0.9354	SE	patient1
patient1_SE_36	HLA-B08:01	LMNNHQLELAKQL	0.9946	0.9353	SE	patient1
patient1_SE_36	HLA-B39:01	LMNNHQLELAKQL	0.9583	0.9905	SE	patient1
patient1_SE_36	HLA-B58:01	LMNNHQLELAKQL	0.983	0.9791	SE	patient1
patient1_SE_36	HLA-B15:01	LMNNHQLELAKQL	0.9999	0.929	SE	patient1
patient1_SE_36	HLA-B15:01	GVYSTTASTANLMN	0.9774	0.9225	SE	patient1
patient1_SE_36	HLA-B15:01	VYSTTASTANLMN	0.9319	0.9376	SE	patient1
patient1_SE_36	HLA-B15:01	YSTTASTANLMNNH	0.9744	0.9351	SE	patient1
patient1_SE_36	HLA-B58:01	STTASTANLMNNHQ	0.9754	0.9678	SE	patient1
patient1_SE_36	HLA-B15:01	STTASTANLMNNHQ	0.987	0.9468	SE	patient1
patient1_SE_36	HLA-B58:01	TTASTANLMNNHQL	0.9963	0.9776	SE	patient1
patient1_SE_36	HLA-B15:01	TTASTANLMNNHQL	0.9968	0.9335	SE	patient1
patient1_SE_36	HLA-B58:01	TASTANLMNNHQLE	0.9677	0.9864	SE	patient1
patient1_SE_36	HLA-B15:01	TASTANLMNNHQLE	0.9896	0.9525	SE	patient1
patient1_SE_36	HLA-B58:01	ASTANLMNNHQLEL	0.9923	0.9636	SE	patient1
patient1_SE_36	HLA-B15:01	ASTANLMNNHQLEL	0.9967	0.9274	SE	patient1
patient1_SE_36	HLA-B58:01	STANLMNNHQLELA	0.9858	0.9688	SE	patient1
patient1_SE_36	HLA-B15:01	STANLMNNHQLELA	0.9863	0.9337	SE	patient1
patient1_SE_36	HLA-B58:01	TANLMNNHQLELAK	0.9881	0.9345	SE	patient1
patient1_SE_36	HLA-B08:01	ANLMNNHQLELAKQ	0.9641	0.9197	SE	patient1
patient1_SE_36	HLA-B58:01	ANLMNNHQLELAKQ	0.996	0.9716	SE	patient1
patient1_SE_36	HLA-B15:01	ANLMNNHQLELAKQ	0.9994	0.9636	SE	patient1
patient1_SE_36	HLA-B58:01	NLMNNHQLELAKQL	0.9833	0.9566	SE	patient1
patient1_SE_36	HLA-B15:01	NLMNNHQLELAKQL	0.9998	0.9655	SE	patient1
patient1_SE_36	HLA-B08:01	LMNNHQLELAKQLH	0.9826	0.9237	SE	patient1

patient1_SE_36	HLA-B58:01	LMNNHQLELAKQLH	0.9669	0.9758	SE	patient1
patient1_SE_36	HLA-B15:01	LMNNHQLELAKQLH	0.9996	0.9425	SE	patient1
patient1_SE_37	HLA-B58:01	TTLHAFael	0.9619	0.982	SE	patient1
patient1_SE_37	HLA-B58:01	GTTLHAFael	0.9241	0.9845	SE	patient1
patient1_SE_37	HLA-B15:01	GTTLHAFael	0.9173	0.92	SE	patient1
patient1_SE_37	HLA-B15:01	TLHAFaelSG	0.9751	0.9095	SE	patient1
patient1_SE_37	HLA-B39:01	LHAFaelSGS	0.9407	0.9373	SE	patient1
patient1_SE_37	HLA-B15:01	LHAFaelSGS	0.9524	0.9292	SE	patient1
patient1_SE_37	HLA-B15:01	AFAelSGSRT	0.9312	0.9305	SE	patient1
patient1_SE_37	HLA-B27:05	FAelSGSRTS	0.9037	0.9177	SE	patient1
patient1_SE_37	HLA-B15:01	FAelSGSRTS	0.9599	0.9571	SE	patient1
patient1_SE_37	HLA-B15:01	AelSGSRTSH	0.9702	0.9034	SE	patient1
patient1_SE_37	HLA-B58:01	GGTTLHAFael	0.9475	0.9635	SE	patient1
patient1_SE_37	HLA-B15:01	GGTTLHAFael	0.9849	0.9047	SE	patient1
patient1_SE_37	HLA-B15:01	GTTLHAFaelS	0.946	0.9251	SE	patient1
patient1_SE_37	HLA-B58:01	TTLHAFaelSG	0.91	0.9485	SE	patient1
patient1_SE_37	HLA-B15:01	TLHAFaelSGS	0.9969	0.9115	SE	patient1
patient1_SE_37	HLA-B58:01	LHAFaelSGSR	0.9964	0.9555	SE	patient1
patient1_SE_37	HLA-B58:01	HAFaelSGSRT	0.965	0.9592	SE	patient1
patient1_SE_37	HLA-B58:01	AFAelSGSRTS	0.9313	0.9668	SE	patient1
patient1_SE_37	HLA-B15:01	AFAelSGSRTS	0.9878	0.9563	SE	patient1
patient1_SE_37	HLA-B08:01	FAelSGSRTSH	0.936	0.9092	SE	patient1
patient1_SE_37	HLA-B27:05	FAelSGSRTSH	0.9979	0.9118	SE	patient1
patient1_SE_37	HLA-B58:01	FAelSGSRTSH	0.9801	0.9545	SE	patient1
patient1_SE_37	HLA-B15:01	FAelSGSRTSH	0.9974	0.9168	SE	patient1
patient1_SE_37	HLA-B39:01	AelSGSRTSHS	0.9242	0.9412	SE	patient1
patient1_SE_37	HLA-B58:01	AelSGSRTSHS	0.9906	0.9475	SE	patient1
patient1_SE_37	HLA-B15:01	AelSGSRTSHS	0.9984	0.9113	SE	patient1
patient1_SE_37	HLA-B08:01	IGGTTLHAFael	0.9748	0.9195	SE	patient1
patient1_SE_37	HLA-B39:01	IGGTTLHAFael	0.951	0.9592	SE	patient1
patient1_SE_37	HLA-B58:01	IGGTTLHAFael	0.9907	0.9178	SE	patient1
patient1_SE_37	HLA-B08:01	GGTTLHAFaelS	0.9677	0.9183	SE	patient1
patient1_SE_37	HLA-B58:01	GGTTLHAFaelS	0.9843	0.9413	SE	patient1
patient1_SE_37	HLA-B58:01	TLHAFaelSGSR	0.9866	0.9333	SE	patient1
patient1_SE_37	HLA-B39:01	LHAFaelSGSRT	0.9994	0.911	SE	patient1
patient1_SE_37	HLA-B58:01	LHAFaelSGSRT	0.9985	0.9536	SE	patient1
patient1_SE_37	HLA-B39:01	HAFaelSGSRTS	0.9236	0.9371	SE	patient1
patient1_SE_37	HLA-B58:01	HAFaelSGSRTS	0.9955	0.9603	SE	patient1
patient1_SE_37	HLA-B15:01	HAFaelSGSRTS	0.9996	0.9445	SE	patient1
patient1_SE_37	HLA-B58:01	AFAelSGSRTSH	0.9934	0.9584	SE	patient1
patient1_SE_37	HLA-B15:01	AFAelSGSRTSH	0.9988	0.9217	SE	patient1

patient1_SE_37	HLA-B08:01	FAELSGSRTSHS	0.9943	0.9242	SE	patient1
patient1_SE_37	HLA-B39:01	FAELSGSRTSHS	0.9676	0.9597	SE	patient1
patient1_SE_37	HLA-B58:01	FAELSGSRTSHS	0.9952	0.9589	SE	patient1
patient1_SE_37	HLA-B15:01	FAELSGSRTSHS	0.9998	0.9345	SE	patient1
patient1_SE_37	HLA-B39:01	AELSGSRTSHSE	0.9916	0.9299	SE	patient1
patient1_SE_37	HLA-B58:01	AELSGSRTSHSE	0.9974	0.9392	SE	patient1
patient1_SE_37	HLA-B39:01	HIGGTTLHAFael	0.9712	0.9573	SE	patient1
patient1_SE_37	HLA-B58:01	HIGGTTLHAFael	0.9877	0.9013	SE	patient1
patient1_SE_37	HLA-B08:01	IGGTTLHAFaelS	0.9793	0.9327	SE	patient1
patient1_SE_37	HLA-B39:01	GGTTLHAFaelSG	0.9071	0.9028	SE	patient1
patient1_SE_37	HLA-B58:01	TLHAFaelSGSRT	0.9885	0.9018	SE	patient1
patient1_SE_37	HLA-B39:01	LHAFaelSGSRTS	0.9995	0.9301	SE	patient1
patient1_SE_37	HLA-B58:01	LHAFaelSGSRTS	0.9987	0.9505	SE	patient1
patient1_SE_37	HLA-B58:01	HAFaelSGSRTSH	0.9983	0.9318	SE	patient1
patient1_SE_37	HLA-B58:01	AFAELSGSRTSHS	0.9952	0.9295	SE	patient1
patient1_SE_37	HLA-B39:01	FAELSGSRTSHSE	0.9949	0.9471	SE	patient1
patient1_SE_37	HLA-B58:01	FAELSGSRTSHSE	0.999	0.9523	SE	patient1
patient1_SE_37	HLA-A24:02	AELSGSRTSHSEG	0.9937	0.9074	SE	patient1
patient1_SE_37	HLA-B39:01	AELSGSRTSHSEG	0.9489	0.9062	SE	patient1
patient1_SE_37	HLA-A24:02	CHIGGTTLHAFael	0.9912	0.9162	SE	patient1
patient1_SE_37	HLA-B39:01	CHIGGTTLHAFael	0.9992	0.9699	SE	patient1
patient1_SE_37	HLA-B58:01	CHIGGTTLHAFael	0.9232	0.9496	SE	patient1
patient1_SE_37	HLA-A24:02	HIGGTTLHAFaelS	0.9726	0.9292	SE	patient1
patient1_SE_37	HLA-B58:01	HIGGTTLHAFaelS	0.9745	0.9238	SE	patient1
patient1_SE_37	HLA-A24:02	FAELSGSRTSHSEG	0.9825	0.9348	SE	patient1
patient1_SE_40	HLA-B39:01	IQELQKKMHLE	0.9146	0.9447	SE	patient1
patient1_SE_40	HLA-B08:01	QELQKKMHLEG	0.9827	0.9295	SE	patient1
patient1_SE_40	HLA-B58:01	QELQKKMHLEG	0.9807	0.9841	SE	patient1
patient1_SE_40	HLA-B39:01	TNIQELQKKMHL	0.9886	0.9616	SE	patient1
patient1_SE_40	HLA-B15:01	TNIQELQKKMHL	0.9992	0.9024	SE	patient1
patient1_SE_40	HLA-B08:01	IQELQKKMHLEG	0.9943	0.9368	SE	patient1
patient1_SE_40	HLA-B39:01	IQELQKKMHLEG	0.9606	0.9831	SE	patient1
patient1_SE_40	HLA-B58:01	IQELQKKMHLEG	0.9902	0.9538	SE	patient1
patient1_SE_40	HLA-B08:01	QELQKKMHLEGR	0.9849	0.9358	SE	patient1
patient1_SE_40	HLA-B39:01	QELQKKMHLEGR	0.9522	0.9771	SE	patient1
patient1_SE_40	HLA-B58:01	QELQKKMHLEGR	0.9955	0.9438	SE	patient1
patient1_SE_40	HLA-B08:01	WETNIQELQKKMH	0.9918	0.9353	SE	patient1
patient1_SE_40	HLA-B39:01	WETNIQELQKKMH	0.9754	0.9607	SE	patient1
patient1_SE_40	HLA-B39:01	ETNIQELQKKMHL	0.9643	0.9282	SE	patient1
patient1_SE_40	HLA-B08:01	TNIQELQKKMHLE	0.9959	0.9074	SE	patient1
patient1_SE_40	HLA-B39:01	TNIQELQKKMHLE	0.9871	0.9875	SE	patient1

patient1_SE_40	HLA-B58:01	TNIQELQKKMHLE	0.9967	0.9287	SE	patient1
patient1_SE_40	HLA-B15:01	TNIQELQKKMHLE	0.9999	0.9025	SE	patient1
patient1_SE_40	HLA-B58:01	NIQELQKKMHLEG	0.9954	0.9691	SE	patient1
patient1_SE_40	HLA-A24:02	IQELQKKMHLEGR	0.9945	0.9581	SE	patient1
patient1_SE_40	HLA-B08:01	IQELQKKMHLEGR	0.9805	0.9479	SE	patient1
patient1_SE_40	HLA-B39:01	IQELQKKMHLEGR	0.9386	0.9876	SE	patient1
patient1_SE_40	HLA-B58:01	IQELQKKMHLEGR	0.9967	0.9595	SE	patient1
patient1_SE_40	HLA-B08:01	QELQKKMHLEGRD	0.9926	0.9446	SE	patient1
patient1_SE_40	HLA-B39:01	QELQKKMHLEGRD	0.9738	0.9575	SE	patient1
patient1_SE_40	HLA-B08:01	ELQKKMHLEGRDG	0.9908	0.934	SE	patient1
patient1_SE_40	HLA-B08:01	LQKKMHLEGRDGR	0.9393	0.9047	SE	patient1
patient1_SE_40	HLA-B39:01	KKMHLEGRDGRY	0.9372	0.9345	SE	patient1
patient1_SE_40	HLA-B58:01	KKMHLEGRDGRY	0.9888	0.9369	SE	patient1
patient1_SE_40	HLA-B39:01	NWETNIQELQKKMH	0.9427	0.9503	SE	patient1
patient1_SE_40	HLA-B58:01	NWETNIQELQKKMH	0.9981	0.9094	SE	patient1
patient1_SE_40	HLA-B08:01	WETNIQELQKKMHL	0.9965	0.9358	SE	patient1
patient1_SE_40	HLA-B39:01	WETNIQELQKKMHL	0.9902	0.9682	SE	patient1
patient1_SE_40	HLA-B58:01	WETNIQELQKKMHL	0.9975	0.935	SE	patient1
patient1_SE_40	HLA-B15:01	WETNIQELQKKMHL	0.9992	0.9075	SE	patient1
patient1_SE_40	HLA-B08:01	ETNIQELQKKMHLE	0.9771	0.9192	SE	patient1
patient1_SE_40	HLA-A24:02	TNIQELQKKMHLEG	0.971	0.9494	SE	patient1
patient1_SE_40	HLA-B08:01	TNIQELQKKMHLEG	0.9599	0.951	SE	patient1
patient1_SE_40	HLA-B40:01	TNIQELQKKMHLEG	0.9135	0.9186	SE	patient1
patient1_SE_40	HLA-B58:01	TNIQELQKKMHLEG	0.992	0.9885	SE	patient1
patient1_SE_40	HLA-B15:01	TNIQELQKKMHLEG	0.9962	0.9596	SE	patient1
patient1_SE_40	HLA-A24:02	NIQELQKKMHLEGR	0.9905	0.9259	SE	patient1
patient1_SE_40	HLA-B08:01	NIQELQKKMHLEGR	0.9654	0.9282	SE	patient1
patient1_SE_40	HLA-B58:01	NIQELQKKMHLEGR	0.9853	0.9481	SE	patient1
patient1_SE_40	HLA-B15:01	NIQELQKKMHLEGR	0.9959	0.954	SE	patient1
patient1_SE_40	HLA-A24:02	IQELQKKMHLEGRD	0.9861	0.959	SE	patient1
patient1_SE_40	HLA-B08:01	IQELQKKMHLEGRD	0.9795	0.9441	SE	patient1
patient1_SE_40	HLA-B58:01	IQELQKKMHLEGRD	0.9843	0.9191	SE	patient1
patient1_SE_40	HLA-B08:01	QELQKKMHLEGRDG	0.979	0.9566	SE	patient1
patient1_SE_40	HLA-A24:02	ELQKKMHLEGRDGR	0.9694	0.9536	SE	patient1
patient1_SE_40	HLA-B08:01	ELQKKMHLEGRDGR	0.9471	0.955	SE	patient1
patient1_SE_42	HLA-B58:01	TSGVQDEMPIL	0.9082	0.9122	SE	patient1
patient1_SE_42	HLA-B58:01	GVQDEMPILLF	0.9901	0.9108	SE	patient1
patient1_SE_42	HLA-B58:01	LTTTSGVQDEMP	0.9916	0.9472	SE	patient1
patient1_SE_42	HLA-B15:01	LTTTSGVQDEMP	0.9974	0.9194	SE	patient1
patient1_SE_42	HLA-B39:01	TTSGVQDEMPIL	0.9393	0.9143	SE	patient1
patient1_SE_42	HLA-B58:01	TTSGVQDEMPIL	0.9812	0.9295	SE	patient1

patient1_SE_42	HLA-B39:01	TSGVQDEMPILL	0.9683	0.9084	SE	patient1
patient1_SE_42	HLA-B08:01	KLTTTSGVQDEMP	0.9164	0.9494	SE	patient1
patient1_SE_42	HLA-B58:01	KLTTTSGVQDEMP	0.972	0.9749	SE	patient1
patient1_SE_42	HLA-B15:01	KLTTTSGVQDEMP	0.9985	0.94	SE	patient1
patient1_SE_42	HLA-B58:01	LTTTSGVQDEMPI	0.9904	0.9374	SE	patient1
patient1_SE_42	HLA-B15:01	LTTTSGVQDEMPI	0.9937	0.9198	SE	patient1
patient1_SE_42	HLA-B39:01	TTTSGVQDEMPIL	0.9639	0.9349	SE	patient1
patient1_SE_42	HLA-B58:01	TTTSGVQDEMPIL	0.992	0.9256	SE	patient1
patient1_SE_42	HLA-B39:01	TTSGVQDEMPILL	0.9795	0.9211	SE	patient1
patient1_SE_42	HLA-B39:01	TSGVQDEMPILLF	0.9613	0.9434	SE	patient1
patient1_SE_42	HLA-B58:01	TSGVQDEMPILLF	0.9993	0.9124	SE	patient1
patient1_SE_42	HLA-B58:01	GVQDEMPILLFLI	0.9947	0.9458	SE	patient1
patient1_SE_42	HLA-B58:01	QDEMPILLFLIDT	0.9574	0.9032	SE	patient1
patient1_SE_42	HLA-B15:01	QDEMPILLFLIDT	0.993	0.9038	SE	patient1
patient1_SE_42	HLA-B58:01	SKLTTTSGVQDEMP	0.9813	0.9791	SE	patient1
patient1_SE_42	HLA-B15:01	SKLTTTSGVQDEMP	0.9932	0.9548	SE	patient1
patient1_SE_42	HLA-B58:01	KLTTTSGVQDEMPI	0.9605	0.981	SE	patient1
patient1_SE_42	HLA-B15:01	KLTTTSGVQDEMPI	0.9964	0.9459	SE	patient1
patient1_SE_42	HLA-B08:01	LTTTSGVQDEMPIL	0.903	0.9442	SE	patient1
patient1_SE_42	HLA-B39:01	LTTTSGVQDEMPIL	0.9003	0.9787	SE	patient1
patient1_SE_42	HLA-B58:01	LTTTSGVQDEMPIL	0.9945	0.9447	SE	patient1
patient1_SE_42	HLA-B15:01	LTTTSGVQDEMPIL	0.9986	0.9058	SE	patient1
patient1_SE_42	HLA-B58:01	TTSGVQDEMPILLF	0.9974	0.943	SE	patient1
patient1_SE_42	HLA-B15:01	TTSGVQDEMPILLF	0.9984	0.9047	SE	patient1
patient1_SE_42	HLA-B58:01	TSGVQDEMPILLFL	0.9974	0.924	SE	patient1
patient1_SE_42	HLA-B58:01	SGVQDEMPILLFLI	0.9933	0.9484	SE	patient1
patient1_SE_42	HLA-B58:01	GVQDEMPILLFLID	0.9645	0.9764	SE	patient1
patient1_SE_42	HLA-B15:01	GVQDEMPILLFLID	0.995	0.92	SE	patient1
patient1_SE_42	HLA-B58:01	VQDEMPILLFLIDT	0.9154	0.9351	SE	patient1
patient1_SE_42	HLA-B15:01	VQDEMPILLFLIDT	0.9922	0.9116	SE	patient1
patient1_SE_42	HLA-B27:05	QDEMPILLFLIDTS	0.9744	0.9031	SE	patient1
patient1_SE_42	HLA-B58:01	QDEMPILLFLIDTS	0.9155	0.9756	SE	patient1
patient1_SE_42	HLA-B15:01	QDEMPILLFLIDTS	0.9614	0.9506	SE	patient1
patient1_SE_42	HLA-B58:01	EMPILLFLIDTSAS	0.9026	0.9107	SE	patient1
patient1_SE_42	HLA-B15:01	EMPILLFLIDTSAS	0.99	0.9076	SE	patient1
patient1_SE_43	HLA-B27:05	KKKNWMTSL	0.9682	0.9606	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKKKNWMTS	0.9235	0.9619	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKNWMTSL	0.9978	0.9616	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKNWMTSLH	0.9962	0.9595	SE	patient1
patient1_SE_43	HLA-B27:05	KKNWMTSLHT	0.9559	0.9452	SE	patient1
patient1_SE_43	HLA-B15:01	WMTSLHTSSE	0.9692	0.9452	SE	patient1

patient1_SE_43	HLA-B27:05	SKKKKKKNWMT	0.9226	0.9339	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKKKNWMTS	0.9798	0.9662	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKKKNWMTS	0.9505	0.9761	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKKKNWMTSL	0.9993	0.9624	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKKKNWMTSL	0.9528	0.9767	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKNWMTSLH	0.9985	0.9611	SE	patient1
patient1_SE_43	HLA-B27:05	KKKNWMTSLHT	0.9875	0.9504	SE	patient1
patient1_SE_43	HLA-B27:05	KKNWMTSLHTS	0.9916	0.9684	SE	patient1
patient1_SE_43	HLA-B15:01	KKNWMTSLHTS	0.9473	0.9758	SE	patient1
patient1_SE_43	HLA-B27:05	KNWMTSLHTSS	0.9345	0.955	SE	patient1
patient1_SE_43	HLA-B15:01	KNWMTSLHTSS	0.9543	0.9489	SE	patient1
patient1_SE_43	HLA-B08:01	NWMTSLHTSSE	0.928	0.9799	SE	patient1
patient1_SE_43	HLA-B15:01	NWMTSLHTSSE	0.9959	0.9489	SE	patient1
patient1_SE_43	HLA-B15:01	WMTSLHTSSES	0.9785	0.9219	SE	patient1
patient1_SE_43	HLA-B58:01	DSKKKKKNWMT	0.9332	0.9415	SE	patient1
patient1_SE_43	HLA-B27:05	SKKKKKKNWMTS	0.9132	0.9657	SE	patient1
patient1_SE_43	HLA-B15:01	SKKKKKKNWMTS	0.9885	0.9797	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKKKNWMTSL	0.9993	0.9663	SE	patient1
patient1_SE_43	HLA-B39:01	KKKKKKNWMTSL	0.9497	0.9891	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKKKNWMTSL	0.9692	0.9801	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKKKNWMTSLH	0.9971	0.9654	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKKKNWMTSLH	0.9667	0.9841	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKNWMTSLHT	0.9939	0.9538	SE	patient1
patient1_SE_43	HLA-B27:05	KKKNWMTSLHTS	0.9963	0.9352	SE	patient1
patient1_SE_43	HLA-B15:01	KKKNWMTSLHTS	0.9849	0.9736	SE	patient1
patient1_SE_43	HLA-B27:05	KKNWMTSLHTSS	0.9967	0.9513	SE	patient1
patient1_SE_43	HLA-B39:01	KKNWMTSLHTSS	0.9088	0.9835	SE	patient1
patient1_SE_43	HLA-B58:01	KKNWMTSLHTSS	0.9151	0.9728	SE	patient1
patient1_SE_43	HLA-B15:01	KKNWMTSLHTSS	0.994	0.9608	SE	patient1
patient1_SE_43	HLA-B08:01	KNWMTSLHTSSE	0.963	0.9414	SE	patient1
patient1_SE_43	HLA-B27:05	KNWMTSLHTSSE	0.9961	0.9531	SE	patient1
patient1_SE_43	HLA-B39:01	KNWMTSLHTSSE	0.9263	0.9813	SE	patient1
patient1_SE_43	HLA-B58:01	KNWMTSLHTSSE	0.9662	0.9555	SE	patient1
patient1_SE_43	HLA-B15:01	KNWMTSLHTSSE	0.9972	0.9472	SE	patient1
patient1_SE_43	HLA-B08:01	NWMTSLHTSSES	0.9706	0.9625	SE	patient1
patient1_SE_43	HLA-B39:01	NWMTSLHTSSES	0.9059	0.9705	SE	patient1
patient1_SE_43	HLA-B58:01	NWMTSLHTSSES	0.9728	0.9502	SE	patient1
patient1_SE_43	HLA-B15:01	NWMTSLHTSSES	0.999	0.9373	SE	patient1
patient1_SE_43	HLA-B08:01	WMTSLHTSSESI	0.9815	0.9102	SE	patient1
patient1_SE_43	HLA-B15:01	WMTSLHTSSESI	0.9949	0.93	SE	patient1
patient1_SE_43	HLA-B27:05	ADSKKKKKKNWMT	0.9503	0.9144	SE	patient1

patient1_SE_43	HLA-B58:01	ADSKKKKKKNWMT	0.9622	0.971	SE	patient1
patient1_SE_43	HLA-B15:01	ADSKKKKKKNWMT	0.937	0.9391	SE	patient1
patient1_SE_43	HLA-B27:05	DSKKKKKKKNWMTS	0.9437	0.9132	SE	patient1
patient1_SE_43	HLA-B58:01	DSKKKKKKKNWMTS	0.9614	0.9669	SE	patient1
patient1_SE_43	HLA-B15:01	DSKKKKKKKNWMTS	0.9416	0.9676	SE	patient1
patient1_SE_43	HLA-B27:05	SKKKKKKKKNWMTSL	0.9935	0.9472	SE	patient1
patient1_SE_43	HLA-B39:01	SKKKKKKKKNWMTSL	0.9658	0.9822	SE	patient1
patient1_SE_43	HLA-B58:01	SKKKKKKKKNWMTSL	0.9379	0.9627	SE	patient1
patient1_SE_43	HLA-B15:01	SKKKKKKKKNWMTSL	0.9863	0.9733	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKKKKKNWMTSLH	0.9979	0.9336	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKKKKKNWMTSLH	0.9906	0.9825	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKKKNWMTSLHT	0.9863	0.9597	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKNWMTSLHTS	0.9968	0.9061	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKNWMTSLHTS	0.9884	0.9714	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKNWMTSLHTSS	0.9972	0.9076	SE	patient1
patient1_SE_43	HLA-B58:01	KKKKNWMTSLHTSS	0.9219	0.9703	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKNWMTSLHTSS	0.9898	0.953	SE	patient1
patient1_SE_43	HLA-B27:05	KKNWMTSLHTSSE	0.9994	0.9397	SE	patient1
patient1_SE_43	HLA-B39:01	KKNWMTSLHTSSE	0.9609	0.9919	SE	patient1
patient1_SE_43	HLA-B58:01	KKNWMTSLHTSSE	0.9788	0.9873	SE	patient1
patient1_SE_43	HLA-B15:01	KKNWMTSLHTSSE	0.9989	0.9763	SE	patient1
patient1_SE_43	HLA-B08:01	KNWMTSLHTSSES	0.9773	0.9104	SE	patient1
patient1_SE_43	HLA-B27:05	KNWMTSLHTSSES	0.9983	0.9416	SE	patient1
patient1_SE_43	HLA-B58:01	KNWMTSLHTSSES	0.9627	0.9682	SE	patient1
patient1_SE_43	HLA-B15:01	KNWMTSLHTSSES	0.9971	0.9449	SE	patient1
patient1_SE_43	HLA-B08:01	NWMTSLHTSSESI	0.9876	0.9671	SE	patient1
patient1_SE_43	HLA-B39:01	NWMTSLHTSSESI	0.9566	0.9759	SE	patient1
patient1_SE_43	HLA-B58:01	NWMTSLHTSSESI	0.9845	0.952	SE	patient1
patient1_SE_43	HLA-B15:01	NWMTSLHTSSESI	0.9944	0.9368	SE	patient1
patient1_SE_43	HLA-B08:01	WMTSLHTSSESID	0.9591	0.9236	SE	patient1
patient1_SE_43	HLA-B27:05	WMTSLHTSSESID	0.9974	0.9082	SE	patient1
patient1_SE_43	HLA-B58:01	WMTSLHTSSESID	0.9625	0.9668	SE	patient1
patient1_SE_43	HLA-B15:01	WMTSLHTSSESID	0.9987	0.9287	SE	patient1
patient1_SE_43	HLA-B58:01	DADSKKKKKKNWMT	0.9807	0.9361	SE	patient1
patient1_SE_43	HLA-B15:01	ADSKKKKKKKKNWMTS	0.9078	0.9402	SE	patient1
patient1_SE_43	HLA-B08:01	DSKKKKKKKNWMTSL	0.9774	0.9376	SE	patient1
patient1_SE_43	HLA-B27:05	DSKKKKKKKNWMTSL	0.9534	0.9045	SE	patient1
patient1_SE_43	HLA-B58:01	DSKKKKKKKNWMTSL	0.9283	0.9691	SE	patient1
patient1_SE_43	HLA-B15:01	DSKKKKKKKNWMTSL	0.9721	0.9604	SE	patient1
patient1_SE_43	HLA-B27:05	SKKKKKKKKNWMTSLH	0.9327	0.9273	SE	patient1
patient1_SE_43	HLA-B27:05	KKKKKKKKNWMTSLHT	0.9058	0.9042	SE	patient1

patient1_SE_43	HLA-B15:01	KKKKNWMTSLHTSS	0.9002	0.9563	SE	patient1
patient1_SE_43	HLA-B27:05	KKKNWMTSLHTSSE	0.9651	0.9169	SE	patient1
patient1_SE_43	HLA-B15:01	KKKKNWMTSLHTSSE	0.949	0.9738	SE	patient1
patient1_SE_43	HLA-B27:05	KKNWMTSLHTSSES	0.9937	0.9248	SE	patient1
patient1_SE_43	HLA-B15:01	KKNWMTSLHTSSES	0.9466	0.9599	SE	patient1
patient1_SE_43	HLA-B27:05	KNWMTSLHTSSESI	0.9896	0.9437	SE	patient1
patient1_SE_43	HLA-B58:01	KNWMTSLHTSSESI	0.978	0.9676	SE	patient1
patient1_SE_43	HLA-B15:01	KNWMTSLHTSSESI	0.9806	0.9409	SE	patient1
patient1_SE_43	HLA-B15:01	NWMTSLHTSSESID	0.9599	0.9386	SE	patient1
patient1_SE_43	HLA-B08:01	WMTSLHTSSESIDL	0.9413	0.9519	SE	patient1
patient1_SE_43	HLA-B58:01	WMTSLHTSSESIDL	0.9335	0.9837	SE	patient1
patient1_SE_43	HLA-B15:01	WMTSLHTSSESIDL	0.9991	0.9511	SE	patient1
patient1_SE_44	HLA-B15:01	ALKTSRWSSH	0.9338	0.9192	SE	patient1
patient1_SE_44	HLA-B58:01	KTSRWSSHAM	0.9859	0.9452	SE	patient1
patient1_SE_44	HLA-B15:01	AALKTSRWSSH	0.913	0.9167	SE	patient1
patient1_SE_44	HLA-B39:01	LKTSRWSSHAM	0.9355	0.9233	SE	patient1
patient1_SE_44	HLA-B39:01	GRSAALKTSRWS	0.9011	0.9058	SE	patient1
patient1_SE_44	HLA-B58:01	GRSAALKTSRWS	0.9059	0.9548	SE	patient1
patient1_SE_44	HLA-B39:01	LKTSRWSSHAME	0.9723	0.9076	SE	patient1
patient1_SE_44	HLA-B58:01	TSRWSSHAMESA	0.9567	0.909	SE	patient1
patient1_SE_44	HLA-B58:01	SRWSSHAMESAT	0.9877	0.918	SE	patient1
patient1_SE_44	HLA-B58:01	GGRSAALKTSRWS	0.9836	0.9359	SE	patient1
patient1_SE_44	HLA-B58:01	GRSAALKTSRWSS	0.9225	0.9453	SE	patient1
patient1_SE_44	HLA-B58:01	RSAALKTSRWSSH	0.9337	0.9422	SE	patient1
patient1_SE_44	HLA-B58:01	SAALKTSRWSSHA	0.9549	0.94	SE	patient1
patient1_SE_44	HLA-B58:01	AALKTSRWSSHAM	0.957	0.9284	SE	patient1
patient1_SE_44	HLA-B58:01	SGGRSAALKTSRWS	0.9709	0.919	SE	patient1
patient1_SE_44	HLA-B58:01	SAALKTSRWSSHAM	0.9787	0.9359	SE	patient1
patient1_SE_46	HLA-B15:01	CSAEDFKVMQ	0.9096	0.928	SE	patient1
patient1_SE_46	HLA-B58:01	VCSAEDFKVMQ	0.9819	0.9729	SE	patient1
patient1_SE_46	HLA-B15:01	CSAEDFKVMQR	0.9587	0.9415	SE	patient1
patient1_SE_46	HLA-B58:01	SAEDFKVMQRR	0.9772	0.9048	SE	patient1
patient1_SE_46	HLA-B15:01	SAEDFKVMQRR	0.9906	0.9102	SE	patient1
patient1_SE_46	HLA-B58:01	AEDFKVMQRRR	0.9882	0.9737	SE	patient1
patient1_SE_46	HLA-B15:01	AEDFKVMQRRR	0.9855	0.9696	SE	patient1
patient1_SE_46	HLA-B39:01	EVCSAEDFKVMQ	0.9342	0.9113	SE	patient1
patient1_SE_46	HLA-B58:01	EVCSAEDFKVMQ	0.9935	0.9422	SE	patient1
patient1_SE_46	HLA-B58:01	VCSAEDFKVMQR	0.9956	0.9719	SE	patient1
patient1_SE_46	HLA-B15:01	VCSAEDFKVMQR	0.9975	0.9019	SE	patient1
patient1_SE_46	HLA-B58:01	CSAEDFKVMQRR	0.9337	0.9801	SE	patient1
patient1_SE_46	HLA-B15:01	CSAEDFKVMQRR	0.9937	0.9496	SE	patient1

patient1_SE_46	HLA-B58:01	SAEDFKVMQRRR	0.9723	0.9514	SE	patient1
patient1_SE_46	HLA-B15:01	SAEDFKVMQRRR	0.9928	0.9474	SE	patient1
patient1_SE_46	HLA-B39:01	AEDFKVMQRRRP	0.9696	0.9566	SE	patient1
patient1_SE_46	HLA-B58:01	AEDFKVMQRRRP	0.9982	0.9612	SE	patient1
patient1_SE_46	HLA-B15:01	AEDFKVMQRRRP	0.9987	0.9403	SE	patient1
patient1_SE_46	HLA-B39:01	FKVMQRRRPLPS	0.9749	0.9311	SE	patient1
patient1_SE_46	HLA-A26:01	GEVCSAEDFKVMQ	0.9897	0.9395	SE	patient1
patient1_SE_46	HLA-B08:01	GEVCSAEDFKVMQ	0.9677	0.9385	SE	patient1
patient1_SE_46	HLA-B39:01	GEVCSAEDFKVMQ	0.9662	0.9672	SE	patient1
patient1_SE_46	HLA-B58:01	GEVCSAEDFKVMQ	0.9968	0.981	SE	patient1
patient1_SE_46	HLA-B15:01	GEVCSAEDFKVMQ	0.9998	0.9429	SE	patient1
patient1_SE_46	HLA-A26:01	EVCSAEDFKVMQR	0.9946	0.911	SE	patient1
patient1_SE_46	HLA-B39:01	EVCSAEDFKVMQR	0.9158	0.9509	SE	patient1
patient1_SE_46	HLA-B58:01	EVCSAEDFKVMQR	0.9914	0.9629	SE	patient1
patient1_SE_46	HLA-B39:01	VCSAEDFKVMQRR	0.9008	0.956	SE	patient1
patient1_SE_46	HLA-B58:01	VCSAEDFKVMQRR	0.9941	0.9765	SE	patient1
patient1_SE_46	HLA-B15:01	VCSAEDFKVMQRR	0.991	0.9272	SE	patient1
patient1_SE_46	HLA-B58:01	CSAEDFKVMQRRR	0.9635	0.9862	SE	patient1
patient1_SE_46	HLA-B15:01	CSAEDFKVMQRRR	0.994	0.972	SE	patient1
patient1_SE_46	HLA-B58:01	SAEDFKVMQRRRP	0.9977	0.9782	SE	patient1
patient1_SE_46	HLA-B15:01	SAEDFKVMQRRRP	0.9766	0.9423	SE	patient1
patient1_SE_46	HLA-A24:02	DFKVMQRRRPLPS	0.9165	0.9113	SE	patient1
patient1_SE_46	HLA-B58:01	DFKVMQRRRPLPS	0.9387	0.9416	SE	patient1
patient1_SE_46	HLA-B15:01	DFKVMQRRRPLPS	0.9853	0.9114	SE	patient1
patient1_SE_46	HLA-B39:01	FKVMQRRRPLPSE	0.9879	0.9584	SE	patient1
patient1_SE_46	HLA-B08:01	VMQRRRPLPSESS	0.9909	0.919	SE	patient1
patient1_SE_46	HLA-A24:02	RGEVCSAEDFKVMQ	0.987	0.9674	SE	patient1
patient1_SE_46	HLA-A26:01	RGEVCSAEDFKVMQ	0.9062	0.9408	SE	patient1
patient1_SE_46	HLA-B07:02	RGEVCSAEDFKVMQ	0.9511	0.9172	SE	patient1
patient1_SE_46	HLA-B08:01	RGEVCSAEDFKVMQ	0.9266	0.9552	SE	patient1
patient1_SE_46	HLA-B40:01	RGEVCSAEDFKVMQ	0.9498	0.9784	SE	patient1
patient1_SE_46	HLA-B58:01	RGEVCSAEDFKVMQ	0.9881	0.9765	SE	patient1
patient1_SE_46	HLA-B15:01	RGEVCSAEDFKVMQ	0.9981	0.9619	SE	patient1
patient1_SE_46	HLA-A24:02	GEVCSAEDFKVMQR	0.9965	0.9452	SE	patient1
patient1_SE_46	HLA-A26:01	GEVCSAEDFKVMQR	0.9114	0.9738	SE	patient1
patient1_SE_46	HLA-B08:01	GEVCSAEDFKVMQR	0.9175	0.9626	SE	patient1
patient1_SE_46	HLA-B40:01	GEVCSAEDFKVMQR	0.9965	0.9235	SE	patient1
patient1_SE_46	HLA-B58:01	GEVCSAEDFKVMQR	0.9937	0.9829	SE	patient1
patient1_SE_46	HLA-B15:01	GEVCSAEDFKVMQR	0.9935	0.9683	SE	patient1
patient1_SE_46	HLA-A24:02	EVCSAEDFKVMQRR	0.9919	0.9076	SE	patient1
patient1_SE_46	HLA-A26:01	EVCSAEDFKVMQRR	0.9802	0.981	SE	patient1

patient1_SE_46	HLA-B58:01	EVCSAEDFKVMQRR	0.975	0.9641	SE	patient1
patient1_SE_46	HLA-B15:01	EVCSAEDFKVMQRR	0.9685	0.9234	SE	patient1
patient1_SE_46	HLA-A24:02	VCSAEDFKVMQRRR	0.9853	0.9094	SE	patient1
patient1_SE_46	HLA-B58:01	VCSAEDFKVMQRRR	0.9898	0.9823	SE	patient1
patient1_SE_46	HLA-B15:01	VCSAEDFKVMQRRR	0.9647	0.9711	SE	patient1
patient1_SE_46	HLA-A24:02	CSAEDFKVMQRRRP	0.9401	0.938	SE	patient1
patient1_SE_46	HLA-B58:01	CSAEDFKVMQRRRP	0.9876	0.9813	SE	patient1
patient1_SE_46	HLA-B15:01	CSAEDFKVMQRRRP	0.9857	0.9784	SE	patient1
patient1_SE_46	HLA-B39:01	SAEDFKVMQRRRPL	0.9068	0.9633	SE	patient1
patient1_SE_46	HLA-B58:01	SAEDFKVMQRRRPL	0.9839	0.9542	SE	patient1
patient1_SE_46	HLA-B15:01	SAEDFKVMQRRRPL	0.9941	0.9122	SE	patient1
patient1_SE_46	HLA-A24:02	EDFKVMQRRRPLPS	0.9144	0.9355	SE	patient1
patient1_SE_46	HLA-B08:01	DFKVMQRRRPLPSE	0.9449	0.9038	SE	patient1
patient1_SE_46	HLA-B15:01	DFKVMQRRRPLPSE	0.9155	0.9187	SE	patient1
patient1_SE_46	HLA-A24:02	FKVMQRRRPLPSES	0.9317	0.9555	SE	patient1
patient1_SE_46	HLA-B08:01	FKVMQRRRPLPSES	0.978	0.9177	SE	patient1
patient1_SE_46	HLA-B08:01	KVMQRRRPLPSESS	0.9709	0.9137	SE	patient1
patient1_SE_48	HLA-B15:01	VTSYMPPGTS	0.9263	0.9796	SE	patient1
patient1_SE_48	HLA-B58:01	TSYMPPGTSC	0.9315	0.9681	SE	patient1
patient1_SE_48	HLA-B15:01	TSYMPPGTSC	0.9617	0.9764	SE	patient1
patient1_SE_48	HLA-B15:01	YMPPGTSCAA	0.9798	0.9633	SE	patient1
patient1_SE_48	HLA-B27:05	TTLVTSYMPPG	0.9869	0.9343	SE	patient1
patient1_SE_48	HLA-B27:05	TLVTSYMPPGT	0.9076	0.9443	SE	patient1
patient1_SE_48	HLA-B27:05	LVTSYMPPGTS	0.9934	0.9336	SE	patient1
patient1_SE_48	HLA-B15:01	LVTSYMPPGTS	0.9321	0.9855	SE	patient1
patient1_SE_48	HLA-B58:01	VTSYMPPGTSC	0.932	0.9733	SE	patient1
patient1_SE_48	HLA-B15:01	VTSYMPPGTSC	0.9917	0.9683	SE	patient1
patient1_SE_48	HLA-B27:05	TSYMPPGTSCA	0.992	0.9323	SE	patient1
patient1_SE_48	HLA-B58:01	TSYMPPGTSCA	0.9329	0.9836	SE	patient1
patient1_SE_48	HLA-B15:01	TSYMPPGTSCA	0.9896	0.9817	SE	patient1
patient1_SE_48	HLA-B15:01	SYMPPGTSCAA	0.9895	0.9535	SE	patient1
patient1_SE_48	HLA-B58:01	VTTLVTSYMPPG	0.9226	0.9932	SE	patient1
patient1_SE_48	HLA-B15:01	VTTLVTSYMPPG	0.9733	0.981	SE	patient1
patient1_SE_48	HLA-B27:05	TTLVTSYMPPGT	0.9824	0.9056	SE	patient1
patient1_SE_48	HLA-B27:05	TLVTSYMPPGTS	0.9988	0.9102	SE	patient1
patient1_SE_48	HLA-B58:01	TLVTSYMPPGTS	0.9813	0.9963	SE	patient1
patient1_SE_48	HLA-B15:01	TLVTSYMPPGTS	0.9842	0.9917	SE	patient1
patient1_SE_48	HLA-B58:01	LVTSYMPPGTSC	0.9915	0.9783	SE	patient1
patient1_SE_48	HLA-B15:01	LVTSYMPPGTSC	0.9936	0.971	SE	patient1
patient1_SE_48	HLA-B58:01	VTSYMPPGTSCA	0.9893	0.973	SE	patient1
patient1_SE_48	HLA-B15:01	VTSYMPPGTSCA	0.9951	0.964	SE	patient1

patient1_SE_48	HLA-B39:01	TSYMPPGTSCAA	0.9418	0.9833	SE	patient1
patient1_SE_48	HLA-B58:01	TSYMPPGTSCAA	0.9778	0.99	SE	patient1
patient1_SE_48	HLA-B15:01	TSYMPPGTSCAA	0.9947	0.9738	SE	patient1
patient1_SE_48	HLA-A24:02	SYMPPGTSCAAR	0.9952	0.9451	SE	patient1
patient1_SE_48	HLA-A26:01	SYMPPGTSCAAR	0.9459	0.9036	SE	patient1
patient1_SE_48	HLA-B58:01	SYMPPGTSCAAR	0.965	0.9887	SE	patient1
patient1_SE_48	HLA-B15:01	SYMPPGTSCAAR	0.9949	0.9653	SE	patient1
patient1_SE_48	HLA-B58:01	YMPPGTSCAARG	0.9289	0.9187	SE	patient1
patient1_SE_48	HLA-B15:01	SMNVTTLVTSYMP	0.9829	0.9427	SE	patient1
patient1_SE_48	HLA-B58:01	MNVTTLVTSYMP	0.9135	0.934	SE	patient1
patient1_SE_48	HLA-B58:01	NVTTLVTSYMP	0.9298	0.9859	SE	patient1
patient1_SE_48	HLA-B15:01	NVTTLVTSYMP	0.985	0.9759	SE	patient1
patient1_SE_48	HLA-A24:02	VTTLVTSYMP	0.9585	0.9361	SE	patient1
patient1_SE_48	HLA-B58:01	VTTLVTSYMP	0.9539	0.9951	SE	patient1
patient1_SE_48	HLA-B15:01	VTTLVTSYMP	0.9631	0.9827	SE	patient1
patient1_SE_48	HLA-A24:02	TTLVTSYMP	0.9924	0.9134	SE	patient1
patient1_SE_48	HLA-B08:01	TTLVTSYMP	0.9126	0.9654	SE	patient1
patient1_SE_48	HLA-B40:01	TTLVTSYMP	0.9172	0.9052	SE	patient1
patient1_SE_48	HLA-B58:01	TTLVTSYMP	0.98	0.9959	SE	patient1
patient1_SE_48	HLA-B15:01	TTLVTSYMP	0.9933	0.9896	SE	patient1
patient1_SE_48	HLA-A24:02	TLVTSYMP	0.9928	0.9461	SE	patient1
patient1_SE_48	HLA-B58:01	TLVTSYMP	0.9918	0.9826	SE	patient1
patient1_SE_48	HLA-B15:01	TLVTSYMP	0.9943	0.9548	SE	patient1
patient1_SE_48	HLA-A24:02	LVTSYMP	0.9943	0.9594	SE	patient1
patient1_SE_48	HLA-B40:01	LVTSYMP	0.9103	0.9475	SE	patient1
patient1_SE_48	HLA-B58:01	LVTSYMP	0.9855	0.9829	SE	patient1
patient1_SE_48	HLA-B15:01	LVTSYMP	0.9913	0.9576	SE	patient1
patient1_SE_48	HLA-A24:02	VTSYMP	0.9959	0.9256	SE	patient1
patient1_SE_48	HLA-B39:01	VTSYMP	0.901	0.9874	SE	patient1
patient1_SE_48	HLA-B40:01	VTSYMP	0.9333	0.9173	SE	patient1
patient1_SE_48	HLA-B58:01	VTSYMP	0.993	0.9854	SE	patient1
patient1_SE_48	HLA-B15:01	VTSYMP	0.9942	0.9465	SE	patient1
patient1_SE_48	HLA-A24:02	TSYMPPGTSCAAR	0.9858	0.9509	SE	patient1
patient1_SE_48	HLA-B40:01	TSYMPPGTSCAAR	0.9359	0.9271	SE	patient1
patient1_SE_48	HLA-B58:01	TSYMPPGTSCAAR	0.9733	0.986	SE	patient1
patient1_SE_48	HLA-B15:01	TSYMPPGTSCAAR	0.9876	0.972	SE	patient1
patient1_SE_48	HLA-A24:02	SYMPPGTSCAARG	0.9968	0.9556	SE	patient1
patient1_SE_48	HLA-B39:01	SYMPPGTSCAARG	0.9581	0.9783	SE	patient1
patient1_SE_48	HLA-B58:01	SYMPPGTSCAARG	0.9796	0.9309	SE	patient1
patient1_SE_48	HLA-B58:01	VSMNVTTLVTSYMP	0.97	0.9764	SE	patient1
patient1_SE_48	HLA-B15:01	SMNVTTLVTSYMP	0.9787	0.9716	SE	patient1

patient1_SE_48	HLA-A24:02	MNVTTLVTSYMPPG	0.9032	0.9288	SE	patient1
patient1_SE_48	HLA-A24:02	VTTLVTSYMPPGTS	0.9128	0.9499	SE	patient1
patient1_SE_48	HLA-B15:01	VTTLVTSYMPPGTS	0.9132	0.9555	SE	patient1
patient1_SE_48	HLA-A24:02	TTLVTSYMPPGTSC	0.9483	0.9567	SE	patient1
patient1_SE_48	HLA-B58:01	TTLVTSYMPPGTSC	0.9297	0.982	SE	patient1
patient1_SE_48	HLA-A24:02	TLVTSYMPPGTSCA	0.9185	0.9671	SE	patient1
patient1_SE_48	HLA-B58:01	TLVTSYMPPGTSCA	0.9151	0.9704	SE	patient1
patient1_SE_48	HLA-B15:01	TLVTSYMPPGTSCA	0.9382	0.9321	SE	patient1
patient1_SE_48	HLA-A24:02	LVTSYMPPGTSCAA	0.951	0.973	SE	patient1
patient1_SE_48	HLA-B58:01	LVTSYMPPGTSCAA	0.9151	0.961	SE	patient1
patient1_SE_48	HLA-A24:02	VTSYMPPGTSCAAR	0.9786	0.9315	SE	patient1
patient1_SE_48	HLA-B58:01	VTSYMPPGTSCAAR	0.9396	0.9209	SE	patient1
patient1_SE_48	HLA-A24:02	TSYMPPGTSCAARG	0.9605	0.9542	SE	patient1
patient1_SE_48	HLA-A24:02	SYMPPGTSCAARGR	0.9968	0.9447	SE	patient1
patient1_SE_48	HLA-A24:02	YMPPGTSCAARGRE	0.973	0.9317	SE	patient1
patient1_SE_49	HLA-B39:01	QKFTSAKMQL	0.9867	0.9253	SE	patient1
patient1_SE_49	HLA-B27:05	KFTSAKMQLL	0.9941	0.9271	SE	patient1
patient1_SE_49	HLA-B15:01	SAKMQLLPPP	0.9621	0.9102	SE	patient1
patient1_SE_49	HLA-B39:01	AKMQLLPPPI	0.9525	0.9112	SE	patient1
patient1_SE_49	HLA-B39:01	QKFTSAKMQLL	0.9862	0.9119	SE	patient1
patient1_SE_49	HLA-B58:01	QKFTSAKMQLL	0.9413	0.9498	SE	patient1
patient1_SE_49	HLA-B15:01	FTSAKMQLLPP	0.9275	0.9446	SE	patient1
patient1_SE_49	HLA-B15:01	TSAKMQLLPPP	0.9543	0.9078	SE	patient1
patient1_SE_49	HLA-B39:01	QKFTSAKMQLLP	0.9533	0.9138	SE	patient1
patient1_SE_49	HLA-B58:01	QKFTSAKMQLLP	0.9914	0.9271	SE	patient1
patient1_SE_49	HLA-B27:05	KFTSAKMQLLPP	0.9928	0.9076	SE	patient1
patient1_SE_49	HLA-B15:01	FTSAKMQLLPPP	0.9773	0.9597	SE	patient1
patient1_SE_49	HLA-B58:01	SAKMQLLPPPIR	0.9076	0.9362	SE	patient1
patient1_SE_49	HLA-B15:01	SAKMQLLPPPIR	0.9411	0.9449	SE	patient1
patient1_SE_49	HLA-B39:01	AKMQLLPPPIRT	0.9467	0.9867	SE	patient1
patient1_SE_49	HLA-B58:01	AKMQLLPPPIRT	0.9076	0.9923	SE	patient1
patient1_SE_49	HLA-B15:01	AKMQLLPPPIRT	0.9596	0.9777	SE	patient1
patient1_SE_49	HLA-B58:01	KMQLLPPPIRTG	0.9414	0.9691	SE	patient1
patient1_SE_49	HLA-B15:01	KMQLLPPPIRTG	0.9908	0.9629	SE	patient1
patient1_SE_49	HLA-B58:01	KQKFTSAKMQLLP	0.9539	0.9016	SE	patient1
patient1_SE_49	HLA-A24:02	QKFTSAKMQLLPP	0.9762	0.942	SE	patient1
patient1_SE_49	HLA-B08:01	QKFTSAKMQLLPP	0.9168	0.9734	SE	patient1
patient1_SE_49	HLA-B39:01	QKFTSAKMQLLPP	0.9147	0.9652	SE	patient1
patient1_SE_49	HLA-B58:01	QKFTSAKMQLLPP	0.9811	0.9419	SE	patient1
patient1_SE_49	HLA-B15:01	QKFTSAKMQLLPP	0.967	0.9242	SE	patient1
patient1_SE_49	HLA-B08:01	KFTSAKMQLLPPP	0.9022	0.9229	SE	patient1

patient1_SE_49	HLA-B27:05	KFTSAKMQLLPPP	0.9957	0.9249	SE	patient1
patient1_SE_49	HLA-B58:01	KFTSAKMQLLPPP	0.925	0.9798	SE	patient1
patient1_SE_49	HLA-B15:01	KFTSAKMQLLPPP	0.9645	0.9729	SE	patient1
patient1_SE_49	HLA-B58:01	FSAKMQLLPPPI	0.981	0.9527	SE	patient1
patient1_SE_49	HLA-B15:01	FSAKMQLLPPPI	0.9913	0.948	SE	patient1
patient1_SE_49	HLA-B08:01	TSAKMQLLPPPIR	0.9049	0.9164	SE	patient1
patient1_SE_49	HLA-B58:01	TSAKMQLLPPPIR	0.9788	0.9636	SE	patient1
patient1_SE_49	HLA-B15:01	TSAKMQLLPPPIR	0.9746	0.9554	SE	patient1
patient1_SE_49	HLA-A24:02	SAKMQLLPPPIRT	0.9453	0.9127	SE	patient1
patient1_SE_49	HLA-B08:01	SAKMQLLPPPIRT	0.9681	0.9412	SE	patient1
patient1_SE_49	HLA-B58:01	SAKMQLLPPPIRT	0.9765	0.9865	SE	patient1
patient1_SE_49	HLA-B15:01	SAKMQLLPPPIRT	0.9943	0.9725	SE	patient1
patient1_SE_49	HLA-A24:02	AKMQLLPPPIRTG	0.9666	0.9116	SE	patient1
patient1_SE_49	HLA-B08:01	AKMQLLPPPIRTG	0.9494	0.9495	SE	patient1
patient1_SE_49	HLA-B39:01	AKMQLLPPPIRTG	0.9691	0.9655	SE	patient1
patient1_SE_49	HLA-B58:01	AKMQLLPPPIRTG	0.9818	0.9606	SE	patient1
patient1_SE_49	HLA-B15:01	AKMQLLPPPIRTG	0.9945	0.9249	SE	patient1
patient1_SE_49	HLA-B58:01	KMQLLPPPIRTGT	0.9578	0.976	SE	patient1
patient1_SE_49	HLA-B15:01	KMQLLPPPIRTGT	0.9968	0.9703	SE	patient1
patient1_SE_49	HLA-A24:02	KARKKQKFTSAKMQ	0.9565	0.9749	SE	patient1
patient1_SE_49	HLA-B08:01	KARKKQKFTSAKMQ	0.986	0.9715	SE	patient1
patient1_SE_49	HLA-B58:01	KARKKQKFTSAKMQ	0.9615	0.9028	SE	patient1
patient1_SE_49	HLA-A24:02	ARKKQKFTSAKMQL	0.9454	0.9261	SE	patient1
patient1_SE_49	HLA-A24:02	KKQKFTSAKMQLP	0.9048	0.9576	SE	patient1
patient1_SE_49	HLA-B15:01	QKFTSAKMQLLPPP	0.9578	0.9317	SE	patient1
patient1_SE_49	HLA-B27:05	KFTSAKMQLLPPPI	0.9961	0.9415	SE	patient1
patient1_SE_49	HLA-B58:01	KFTSAKMQLLPPPI	0.9232	0.988	SE	patient1
patient1_SE_49	HLA-B15:01	KFTSAKMQLLPPPI	0.9305	0.9816	SE	patient1
patient1_SE_49	HLA-A24:02	FSAKMQLLPPPIR	0.973	0.9804	SE	patient1
patient1_SE_49	HLA-B08:01	FSAKMQLLPPPIR	0.9164	0.9498	SE	patient1
patient1_SE_49	HLA-B58:01	FSAKMQLLPPPIR	0.9443	0.991	SE	patient1
patient1_SE_49	HLA-B15:01	FSAKMQLLPPPIR	0.9678	0.985	SE	patient1
patient1_SE_49	HLA-A24:02	TSAKMQLLPPPIRT	0.9331	0.9313	SE	patient1
patient1_SE_49	HLA-B58:01	TSAKMQLLPPPIRT	0.9855	0.9801	SE	patient1
patient1_SE_49	HLA-B15:01	TSAKMQLLPPPIRT	0.901	0.97	SE	patient1
patient1_SE_49	HLA-A24:02	SAKMQLLPPPIRTG	0.9352	0.9271	SE	patient1
patient1_SE_49	HLA-B58:01	SAKMQLLPPPIRTG	0.9488	0.9388	SE	patient1
patient1_SE_49	HLA-B15:01	SAKMQLLPPPIRTG	0.9876	0.9111	SE	patient1
patient1_SE_49	HLA-B58:01	KMQLLPPPIRTGTK	0.9372	0.9733	SE	patient1
patient1_SE_49	HLA-B15:01	KMQLLPPPIRTGTK	0.9971	0.9564	SE	patient1
patient1_SE_51	HLA-B15:01	CYSHDIIDAEV	0.9947	0.9244	SE	patient1

patient1_SE_51	HLA-B39:01	STEWIEKENCYS	0.9482	0.9305	SE	patient1
patient1_SE_51	HLA-B15:01	STEWIEKENCYS	0.9985	0.9284	SE	patient1
patient1_SE_51	HLA-B39:01	TEWIEKENCYSH	0.9726	0.9091	SE	patient1
patient1_SE_51	HLA-B58:01	NCYSHDIIDAEV	0.9894	0.913	SE	patient1
patient1_SE_51	HLA-B58:01	CYSHDIIDAEVT	0.9964	0.9588	SE	patient1
patient1_SE_51	HLA-B15:01	CYSHDIIDAEVT	0.9992	0.9357	SE	patient1
patient1_SE_51	HLA-B58:01	LSTEWIEKENCYS	0.9973	0.9138	SE	patient1
patient1_SE_51	HLA-B15:01	LSTEWIEKENCYS	0.9993	0.9362	SE	patient1
patient1_SE_51	HLA-B39:01	STEWIEKENCYSH	0.9495	0.9499	SE	patient1
patient1_SE_51	HLA-B58:01	STEWIEKENCYSH	0.9931	0.9457	SE	patient1
patient1_SE_51	HLA-B15:01	STEWIEKENCYSH	0.9868	0.9347	SE	patient1
patient1_SE_51	HLA-B58:01	NCYSHDIIDAEVT	0.9974	0.9427	SE	patient1
patient1_SE_51	HLA-B15:01	NCYSHDIIDAEVT	0.9997	0.9314	SE	patient1
patient1_SE_51	HLA-B39:01	CYSHDIIDAEVTC	0.9311	0.9382	SE	patient1
patient1_SE_51	HLA-B58:01	CYSHDIIDAEVTC	0.9961	0.9688	SE	patient1
patient1_SE_51	HLA-B15:01	CYSHDIIDAEVTC	0.997	0.9431	SE	patient1
patient1_SE_51	HLA-B15:01	ILSTEWIEKENCYS	0.9955	0.9423	SE	patient1
patient1_SE_51	HLA-B15:01	LSTEWIEKENCYSH	0.9472	0.9401	SE	patient1
patient1_SE_51	HLA-B58:01	STEWIEKENCYSHD	0.9532	0.9401	SE	patient1
patient1_SE_51	HLA-B39:01	TEWIEKENCYSHDI	0.9441	0.9173	SE	patient1
patient1_SE_51	HLA-B58:01	WIEKENCYSHDIID	0.9449	0.9081	SE	patient1
patient1_SE_51	HLA-B15:01	WIEKENCYSHDIID	0.9865	0.9059	SE	patient1
patient1_SE_51	HLA-B58:01	IEKENCYSHDIIDA	0.9741	0.9123	SE	patient1
patient1_SE_51	HLA-B15:01	IEKENCYSHDIIDA	0.9908	0.9067	SE	patient1
patient1_SE_51	HLA-B27:05	KENCYSHDIIDAEV	0.9983	0.9015	SE	patient1
patient1_SE_51	HLA-B39:01	KENCYSHDIIDAEV	0.9011	0.9341	SE	patient1
patient1_SE_51	HLA-B58:01	KENCYSHDIIDAEV	0.9915	0.9366	SE	patient1
patient1_SE_51	HLA-B15:01	KENCYSHDIIDAEV	0.9964	0.9339	SE	patient1
patient1_SE_51	HLA-B39:01	ENCYSHDIIDAEVT	0.9779	0.9229	SE	patient1
patient1_SE_51	HLA-B58:01	ENCYSHDIIDAEVT	0.9559	0.9342	SE	patient1
patient1_SE_51	HLA-B15:01	ENCYSHDIIDAEVT	0.9821	0.9306	SE	patient1
patient1_SE_51	HLA-B58:01	NCYSHDIIDAEVTC	0.9831	0.9542	SE	patient1
patient1_SE_51	HLA-B15:01	NCYSHDIIDAEVTC	0.98	0.9287	SE	patient1
patient1_SE_51	HLA-B58:01	CYSHDIIDAEVTCK	0.9868	0.9727	SE	patient1
patient1_SE_51	HLA-B15:01	CYSHDIIDAEVTCK	0.9953	0.952	SE	patient1
patient1_SE_52	HLA-B58:01	AAHQREKIRALE	0.9883	0.9309	SE	patient1
patient1_SE_52	HLA-A24:02	ETKDAAHQREKIR	0.9935	0.9352	SE	patient1
patient1_SE_52	HLA-A26:01	ETKDAAHQREKIR	0.9938	0.9505	SE	patient1
patient1_SE_52	HLA-B39:01	ETKDAAHQREKIR	0.9271	0.9552	SE	patient1
patient1_SE_52	HLA-B58:01	AAHQREKIRALEP	0.9895	0.9193	SE	patient1
patient1_SE_52	HLA-A24:02	ESQASSETKDAAHQ	0.9843	0.9388	SE	patient1

patient1_SE_52	HLA-A24:02	SSETKDAAHQREKI	0.9931	0.9096	SE	patient1
patient1_SE_52	HLA-A24:02	SETKDAAHQREKIR	0.9828	0.9588	SE	patient1
patient1_SE_52	HLA-B39:01	SETKDAAHQREKIR	0.9024	0.9537	SE	patient1
patient1_SE_52	HLA-B58:01	SETKDAAHQREKIR	0.9885	0.9153	SE	patient1
patient1_SE_52	HLA-A24:02	ETKDAAHQREKIRA	0.9735	0.9681	SE	patient1
patient1_SE_52	HLA-A26:01	ETKDAAHQREKIRA	0.9428	0.9652	SE	patient1
patient1_SE_52	HLA-B58:01	AAHQREKIRALEPL	0.9605	0.9131	SE	patient1
patient1_SE_55	HLA-B58:01	RTLMACQSQRY	0.9833	0.9216	SE	patient1
patient1_SE_55	HLA-B15:01	RKLLQKRRTLMA	0.9115	0.9079	SE	patient1
patient1_SE_55	HLA-B58:01	RRTLMACQSQRY	0.9724	0.9084	SE	patient1
patient1_SE_55	HLA-B58:01	RKLLQKRRTLMAC	0.9612	0.927	SE	patient1
patient1_SE_55	HLA-B08:01	KLLQKRRTLMACQ	0.9285	0.9478	SE	patient1
patient1_SE_55	HLA-B15:01	KLLQKRRTLMACQ	0.9451	0.9665	SE	patient1
patient1_SE_55	HLA-B58:01	RTLMACQSQRYHS	0.9452	0.9389	SE	patient1
patient1_SE_55	HLA-B58:01	TLMACQSQRYHSF	0.9513	0.9197	SE	patient1
patient1_SE_55	HLA-B58:01	LMACQSQRYHSFS	0.9511	0.9578	SE	patient1
patient1_SE_55	HLA-B08:01	QNRKLLQKRRTLMA	0.9722	0.9515	SE	patient1
patient1_SE_55	HLA-B15:01	QNRKLLQKRRTLMA	0.9355	0.9647	SE	patient1
patient1_SE_55	HLA-B15:01	RKLLQKRRTLMACQ	0.9301	0.9146	SE	patient1
patient1_SE_55	HLA-B15:01	KLLQKRRTLMACQ	0.9751	0.9427	SE	patient1
patient1_SE_55	HLA-A24:02	LQKRRTLMACQSR	0.9332	0.9331	SE	patient1
patient1_SE_55	HLA-B08:01	LQKRRTLMACQSR	0.9491	0.9007	SE	patient1
patient1_SE_55	HLA-B58:01	RTLMACQSQRYHSF	0.9984	0.971	SE	patient1
patient1_SE_55	HLA-B58:01	TLMACQSQRYHSFS	0.9243	0.9688	SE	patient1
patient1_SE_55	HLA-B08:01	LMACQSQRYHSFSS	0.9217	0.9218	SE	patient1
patient1_SE_55	HLA-B58:01	LMACQSQRYHSFSS	0.9601	0.9686	SE	patient1
patient1_SE_56	HLA-A26:01	EVVTSAILRVP	0.9094	0.9523	SE	patient1
patient1_SE_56	HLA-B39:01	LRVPNRQPQVA	0.9064	0.9441	SE	patient1
patient1_SE_56	HLA-A24:02	WEVVTSAILRVP	0.9852	0.9023	SE	patient1
patient1_SE_56	HLA-B58:01	WEVVTSAILRVP	0.9738	0.9452	SE	patient1
patient1_SE_56	HLA-A26:01	EVVTSAILRVPN	0.9905	0.9598	SE	patient1
patient1_SE_56	HLA-A24:02	SAILRVPNRQPQ	0.9153	0.9041	SE	patient1
patient1_SE_56	HLA-B39:01	LRVPNRQPQVAP	0.9602	0.9447	SE	patient1
patient1_SE_56	HLA-A24:02	AWEVVTSAILRVP	0.9959	0.9435	SE	patient1
patient1_SE_56	HLA-A24:02	WEVVTSAILRVPN	0.987	0.9127	SE	patient1
patient1_SE_56	HLA-B58:01	WEVVTSAILRVPN	0.9825	0.9674	SE	patient1
patient1_SE_56	HLA-A24:02	EVVTSAILRVPNR	0.9832	0.9142	SE	patient1
patient1_SE_56	HLA-A26:01	EVVTSAILRVPNR	0.9903	0.9709	SE	patient1
patient1_SE_56	HLA-A24:02	TSAILRVPNRQPQ	0.9768	0.9153	SE	patient1
patient1_SE_56	HLA-A24:02	SAILRVPNRQPQV	0.9548	0.9343	SE	patient1
patient1_SE_56	HLA-B08:01	SAILRVPNRQPQV	0.9926	0.9065	SE	patient1

patient1_SE_56	HLA-B58:01	SAILRVPNRQPQV	0.9772	0.9521	SE	patient1
patient1_SE_56	HLA-B15:01	SAILRVPNRQPQV	0.9849	0.9126	SE	patient1
patient1_SE_56	HLA-A24:02	AILRVPNRQPQVA	0.9538	0.9545	SE	patient1
patient1_SE_56	HLA-A24:02	ILRVPNRQPQVAP	0.9514	0.9708	SE	patient1
patient1_SE_56	HLA-B39:01	LRVVPNRQPQVAPE	0.9496	0.9499	SE	patient1
patient1_SE_56	HLA-A24:02	AWEVVTSAILRVPN	0.992	0.9502	SE	patient1
patient1_SE_56	HLA-B58:01	AWEVVTSAILRVPN	0.9677	0.93	SE	patient1
patient1_SE_56	HLA-A24:02	WEVVTSAILRVPNR	0.9662	0.9386	SE	patient1
patient1_SE_56	HLA-A24:02	EVVTSAILRVPNRQ	0.9615	0.9343	SE	patient1
patient1_SE_56	HLA-A26:01	EVVTSAILRVPNRQ	0.9899	0.957	SE	patient1
patient1_SE_56	HLA-A24:02	TSAILRVPNRQPQV	0.9679	0.9394	SE	patient1
patient1_SE_56	HLA-B08:01	TSAILRVPNRQPQV	0.9226	0.9075	SE	patient1
patient1_SE_56	HLA-A24:02	SAILRVPNRQPQVA	0.9432	0.936	SE	patient1
patient1_SE_56	HLA-B08:01	SAILRVPNRQPQVA	0.9757	0.9074	SE	patient1
patient1_SE_56	HLA-B58:01	SAILRVPNRQPQVA	0.9479	0.9244	SE	patient1
patient1_SE_56	HLA-A24:02	AILRVPNRQPQVAP	0.9472	0.9646	SE	patient1
patient1_SE_57	HLA-B15:01	FLINEETMMG	0.9785	0.9317	SE	patient1
patient1_SE_57	HLA-B27:05	SFLINEETMMG	0.9728	0.9102	SE	patient1
patient1_SE_57	HLA-B15:01	SFLINEETMMG	0.9524	0.9435	SE	patient1
patient1_SE_57	HLA-B15:01	TMMGDPDLLEV	0.9886	0.9129	SE	patient1
patient1_SE_57	HLA-B27:05	TSFLINEETMMG	0.9935	0.9283	SE	patient1
patient1_SE_57	HLA-B58:01	TSFLINEETMMG	0.9967	0.9446	SE	patient1
patient1_SE_57	HLA-B15:01	TSFLINEETMMG	0.9972	0.9677	SE	patient1
patient1_SE_57	HLA-B15:01	FLINEETMMGDP	0.997	0.9042	SE	patient1
patient1_SE_57	HLA-B39:01	EETMMGDPDLLE	0.974	0.9273	SE	patient1
patient1_SE_57	HLA-B08:01	ETMMGDPDLLEV	0.9025	0.9277	SE	patient1
patient1_SE_57	HLA-B15:01	ETMMGDPDLLEV	0.963	0.9098	SE	patient1
patient1_SE_57	HLA-B08:01	TMMGDPDLLEVL	0.952	0.9386	SE	patient1
patient1_SE_57	HLA-B39:01	TMMGDPDLLEVL	0.9437	0.9513	SE	patient1
patient1_SE_57	HLA-B58:01	TMMGDPDLLEVL	0.9693	0.9677	SE	patient1
patient1_SE_57	HLA-B15:01	TMMGDPDLLEVL	0.9998	0.9057	SE	patient1
patient1_SE_57	HLA-B27:05	ETSFLINEETMMG	0.9974	0.9172	SE	patient1
patient1_SE_57	HLA-B58:01	ETSFLINEETMMG	0.9917	0.907	SE	patient1
patient1_SE_57	HLA-B15:01	ETSFLINEETMMG	0.9978	0.9169	SE	patient1
patient1_SE_57	HLA-B58:01	TSFLINEETMMGD	0.9963	0.9316	SE	patient1
patient1_SE_57	HLA-B15:01	TSFLINEETMMGD	0.9992	0.9163	SE	patient1
patient1_SE_57	HLA-B58:01	SFLINEETMMGDP	0.9811	0.9119	SE	patient1
patient1_SE_57	HLA-B15:01	SFLINEETMMGDP	0.964	0.9254	SE	patient1
patient1_SE_57	HLA-B15:01	INEETMMGDPDLL	0.999	0.9302	SE	patient1
patient1_SE_57	HLA-B39:01	EETMMGDPDLLEV	0.9306	0.9581	SE	patient1
patient1_SE_57	HLA-B58:01	EETMMGDPDLLEV	0.9927	0.9214	SE	patient1

patient1_SE_57	HLA-B08:01	ETMMGDPDLLEVL	0.9765	0.9467	SE	patient1
patient1_SE_57	HLA-B39:01	ETMMGDPDLLEVL	0.9558	0.9644	SE	patient1
patient1_SE_57	HLA-B58:01	ETMMGDPDLLEVL	0.9934	0.9336	SE	patient1
patient1_SE_57	HLA-B15:01	ETMMGDPDLLEVL	0.9997	0.9305	SE	patient1
patient1_SE_57	HLA-B08:01	TMMGDPDLLEVLA	0.9186	0.9188	SE	patient1
patient1_SE_57	HLA-B58:01	TMMGDPDLLEVLA	0.9671	0.9827	SE	patient1
patient1_SE_57	HLA-B15:01	TMMGDPDLLEVLA	0.9993	0.9352	SE	patient1
patient1_SE_57	HLA-B08:01	MMGDPDLLEVLAE	0.9719	0.9035	SE	patient1
patient1_SE_57	HLA-B58:01	MMGDPDLLEVLAE	0.9927	0.9785	SE	patient1
patient1_SE_57	HLA-B15:01	MMGDPDLLEVLAE	0.9997	0.9337	SE	patient1
patient1_SE_57	HLA-B58:01	RETSFLINEETMMG	0.9242	0.9659	SE	patient1
patient1_SE_57	HLA-B15:01	RETSFLINEETMMG	0.993	0.9667	SE	patient1
patient1_SE_57	HLA-B27:05	TSFLINEETMMGDP	0.9773	0.9067	SE	patient1
patient1_SE_57	HLA-B58:01	TSFLINEETMMGDP	0.9762	0.9564	SE	patient1
patient1_SE_57	HLA-B15:01	TSFLINEETMMGDP	0.9841	0.9526	SE	patient1
patient1_SE_57	HLA-B58:01	SFLINEETMMGDPD	0.9157	0.902	SE	patient1
patient1_SE_57	HLA-B15:01	SFLINEETMMGDPD	0.9564	0.9385	SE	patient1
patient1_SE_57	HLA-B15:01	FLINEETMMGDPDL	0.9998	0.911	SE	patient1
patient1_SE_57	HLA-B15:01	INEETMMGDPDLLE	0.988	0.9142	SE	patient1
patient1_SE_57	HLA-A26:01	EETMMGDPDLLEVL	0.9778	0.942	SE	patient1
patient1_SE_57	HLA-B08:01	EETMMGDPDLLEVL	0.9307	0.9142	SE	patient1
patient1_SE_57	HLA-B39:01	EETMMGDPDLLEVL	0.963	0.9774	SE	patient1
patient1_SE_57	HLA-B58:01	EETMMGDPDLLEVL	0.9729	0.968	SE	patient1
patient1_SE_57	HLA-B15:01	EETMMGDPDLLEVL	0.9979	0.9447	SE	patient1
patient1_SE_57	HLA-A24:02	ETMMGDPDLLEVLA	0.9748	0.9207	SE	patient1
patient1_SE_57	HLA-A26:01	ETMMGDPDLLEVLA	0.9912	0.9207	SE	patient1
patient1_SE_57	HLA-B58:01	ETMMGDPDLLEVLA	0.9744	0.9741	SE	patient1
patient1_SE_57	HLA-B15:01	ETMMGDPDLLEVLA	0.9791	0.9417	SE	patient1
patient1_SE_57	HLA-B58:01	TMMGDPDLLEVLAE	0.956	0.9879	SE	patient1
patient1_SE_57	HLA-B15:01	TMMGDPDLLEVLAE	0.9993	0.9692	SE	patient1
patient1_SE_57	HLA-B58:01	MMGDPDLLEVLAE	0.9599	0.9874	SE	patient1
patient1_SE_57	HLA-B15:01	MMGDPDLLEVLAE	0.9975	0.9755	SE	patient1
patient1_SE_58	HLA-B15:01	AQIKATPEME	0.9958	0.9582	SE	patient1
patient1_SE_58	HLA-B15:01	QIKATPEMES	0.9784	0.9115	SE	patient1
patient1_SE_58	HLA-B58:01	RAQIKATPEME	0.9875	0.9587	SE	patient1
patient1_SE_58	HLA-B08:01	AQIKATPEMES	0.958	0.9229	SE	patient1
patient1_SE_58	HLA-B39:01	AQIKATPEMES	0.9506	0.9774	SE	patient1
patient1_SE_58	HLA-B58:01	AQIKATPEMES	0.9577	0.9764	SE	patient1
patient1_SE_58	HLA-B15:01	AQIKATPEMES	0.9992	0.9065	SE	patient1
patient1_SE_58	HLA-B58:01	QIKATPEMESS	0.9325	0.9862	SE	patient1
patient1_SE_58	HLA-B15:01	QIKATPEMESS	0.9984	0.9382	SE	patient1

patient1_SE_58	HLA-B39:01	IKATPEMESST	0.9893	0.9516	SE	patient1
patient1_SE_58	HLA-B58:01	YRAQIKATPEME	0.9961	0.9036	SE	patient1
patient1_SE_58	HLA-B39:01	RAQIKATPEMES	0.961	0.9572	SE	patient1
patient1_SE_58	HLA-B58:01	RAQIKATPEMES	0.9977	0.9464	SE	patient1
patient1_SE_58	HLA-B08:01	AQIKATPEMESS	0.9852	0.9195	SE	patient1
patient1_SE_58	HLA-B39:01	AQIKATPEMESS	0.9881	0.9792	SE	patient1
patient1_SE_58	HLA-B58:01	AQIKATPEMESS	0.9923	0.9858	SE	patient1
patient1_SE_58	HLA-B15:01	AQIKATPEMESS	0.9998	0.9462	SE	patient1
patient1_SE_58	HLA-B08:01	QIKATPEMESST	0.9845	0.9202	SE	patient1
patient1_SE_58	HLA-B58:01	QIKATPEMESST	0.9844	0.9912	SE	patient1
patient1_SE_58	HLA-B15:01	QIKATPEMESST	0.9993	0.9625	SE	patient1
patient1_SE_58	HLA-B39:01	IKATPEMESSTG	0.9936	0.9385	SE	patient1
patient1_SE_58	HLA-B39:01	YRAQIKATPEMES	0.9962	0.9351	SE	patient1
patient1_SE_58	HLA-B39:01	RAQIKATPEMESS	0.9635	0.9541	SE	patient1
patient1_SE_58	HLA-B58:01	RAQIKATPEMESS	0.9955	0.9587	SE	patient1
patient1_SE_58	HLA-B15:01	RAQIKATPEMESS	0.9998	0.9088	SE	patient1
patient1_SE_58	HLA-B08:01	AQIKATPEMESST	0.9883	0.9435	SE	patient1
patient1_SE_58	HLA-B39:01	AQIKATPEMESST	0.9759	0.9886	SE	patient1
patient1_SE_58	HLA-B40:01	AQIKATPEMESST	0.988	0.9485	SE	patient1
patient1_SE_58	HLA-B58:01	AQIKATPEMESST	0.9889	0.9921	SE	patient1
patient1_SE_58	HLA-B15:01	AQIKATPEMESST	0.9999	0.979	SE	patient1
patient1_SE_58	HLA-B08:01	QIKATPEMESSTG	0.9932	0.9208	SE	patient1
patient1_SE_58	HLA-B40:01	QIKATPEMESSTG	0.9135	0.9238	SE	patient1
patient1_SE_58	HLA-B15:01	QIKATPEMESSTG	0.9999	0.9276	SE	patient1
patient1_SE_58	HLA-B39:01	IKATPEMESSTGP	0.9495	0.9244	SE	patient1
patient1_SE_58	HLA-B39:01	ATPEMESSTGPRM	0.9748	0.9407	SE	patient1
patient1_SE_58	HLA-A24:02	TPEMESSTGPRMP	0.9959	0.9432	SE	patient1
patient1_SE_58	HLA-B08:01	TPEMESSTGPRMP	0.9913	0.9322	SE	patient1
patient1_SE_58	HLA-B58:01	TPEMESSTGPRMP	0.9955	0.9058	SE	patient1
patient1_SE_58	HLA-B39:01	PEMESSTGPRMPL	0.9909	0.916	SE	patient1
patient1_SE_58	HLA-B15:01	YYRAQIKATPEMES	0.9938	0.9089	SE	patient1
patient1_SE_58	HLA-B39:01	YRAQIKATPEMESS	0.9688	0.9388	SE	patient1
patient1_SE_58	HLA-B08:01	RAQIKATPEMESST	0.9082	0.9025	SE	patient1
patient1_SE_58	HLA-B58:01	RAQIKATPEMESST	0.9779	0.9589	SE	patient1
patient1_SE_58	HLA-B15:01	RAQIKATPEMESST	0.9985	0.93	SE	patient1
patient1_SE_58	HLA-A24:02	AQIKATPEMESSTG	0.9537	0.9304	SE	patient1
patient1_SE_58	HLA-B40:01	AQIKATPEMESSTG	0.9377	0.9286	SE	patient1
patient1_SE_58	HLA-A24:02	QIKATPEMESSTGP	0.9779	0.9397	SE	patient1
patient1_SE_58	HLA-B58:01	QIKATPEMESSTGP	0.9453	0.9046	SE	patient1
patient1_SE_58	HLA-B15:01	QIKATPEMESSTGP	0.998	0.9037	SE	patient1
patient1_SE_58	HLA-A24:02	IKATPEMESSTGPR	0.9913	0.963	SE	patient1

patient1_SE_58	HLA-B58:01	IKATPEMESSTGPR	0.9519	0.9473	SE	patient1
patient1_SE_58	HLA-A24:02	KATPEMESSTGPRM	0.9922	0.9173	SE	patient1
patient1_SE_58	HLA-B08:01	KATPEMESSTGPRM	0.961	0.9269	SE	patient1
patient1_SE_58	HLA-B40:01	KATPEMESSTGPRM	0.9072	0.9342	SE	patient1
patient1_SE_58	HLA-B58:01	KATPEMESSTGPRM	0.9979	0.9358	SE	patient1
patient1_SE_58	HLA-A24:02	ATPEMESSTGPRMP	0.9623	0.9391	SE	patient1
patient1_SE_58	HLA-A24:02	TPEMESSTGPRMPL	0.9896	0.9519	SE	patient1
patient1_SE_58	HLA-B08:01	TPEMESSTGPRMPL	0.9592	0.934	SE	patient1
patient1_SE_58	HLA-B39:01	TPEMESSTGPRMPL	0.9448	0.9347	SE	patient1
patient1_SE_58	HLA-B39:01	PEMESSTGPRMPLL	0.9047	0.9152	SE	patient1
patient1_SE_60	HLA-B15:01	GVCRCWEPGPG	0.9502	0.9049	SE	patient1
patient1_SE_60	HLA-B15:01	RCWEPGPGPP	0.9221	0.9826	SE	patient1
patient1_SE_60	HLA-B27:05	CWEPGPGPPL	0.9924	0.9711	SE	patient1
patient1_SE_60	HLA-B15:01	WEPGPGPPLP	0.982	0.9484	SE	patient1
patient1_SE_60	HLA-A24:02	EDAGVRCWEPG	0.9256	0.9152	SE	patient1
patient1_SE_60	HLA-A26:01	EDAGVRCWEPG	0.9167	0.944	SE	patient1
patient1_SE_60	HLA-A24:02	AGVRCWEPGPG	0.915	0.9157	SE	patient1
patient1_SE_60	HLA-B40:01	AGVRCWEPGPG	0.9257	0.9492	SE	patient1
patient1_SE_60	HLA-B58:01	AGVRCWEPGPG	0.9715	0.9455	SE	patient1
patient1_SE_60	HLA-B15:01	AGVRCWEPGPG	0.9971	0.9141	SE	patient1
patient1_SE_60	HLA-A24:02	GVCRCWEPGPGP	0.9434	0.901	SE	patient1
patient1_SE_60	HLA-A24:02	VRCWEPGPGPP	0.9826	0.9061	SE	patient1
patient1_SE_60	HLA-B39:01	VRCWEPGPGPP	0.935	0.9761	SE	patient1
patient1_SE_60	HLA-B40:01	VRCWEPGPGPP	0.9112	0.9609	SE	patient1
patient1_SE_60	HLA-B58:01	VRCWEPGPGPP	0.9929	0.9902	SE	patient1
patient1_SE_60	HLA-B15:01	VRCWEPGPGPP	0.999	0.9591	SE	patient1
patient1_SE_60	HLA-B27:05	RCWEPGPGPPL	0.9991	0.9279	SE	patient1
patient1_SE_60	HLA-B39:01	RCWEPGPGPPL	0.9337	0.9903	SE	patient1
patient1_SE_60	HLA-B58:01	RCWEPGPGPPL	0.9524	0.9973	SE	patient1
patient1_SE_60	HLA-B15:01	RCWEPGPGPPL	0.9921	0.9875	SE	patient1
patient1_SE_60	HLA-A03:01	CWEPGPGPPLP	0.9361	0.9352	SE	patient1
patient1_SE_60	HLA-B08:01	CWEPGPGPPLP	0.9504	0.9021	SE	patient1
patient1_SE_60	HLA-B27:05	CWEPGPGPPLP	0.9998	0.9036	SE	patient1
patient1_SE_60	HLA-B40:01	CWEPGPGPPLP	0.9636	0.9573	SE	patient1
patient1_SE_60	HLA-B58:01	CWEPGPGPPLP	0.995	0.9914	SE	patient1
patient1_SE_60	HLA-B15:01	CWEPGPGPPLP	0.9981	0.9828	SE	patient1
patient1_SE_60	HLA-A26:01	WEPGPGPPLPA	0.9055	0.9564	SE	patient1
patient1_SE_60	HLA-B39:01	WEPGPGPPLPA	0.9832	0.9877	SE	patient1
patient1_SE_60	HLA-B40:01	WEPGPGPPLPA	0.9942	0.9632	SE	patient1
patient1_SE_60	HLA-B58:01	WEPGPGPPLPA	0.9769	0.9717	SE	patient1
patient1_SE_60	HLA-B15:01	WEPGPGPPLPA	0.9996	0.9254	SE	patient1

patient1_SE_60	HLA-A26:01	HEEDAGVRCWEP	0.9611	0.9299	SE	patient1
patient1_SE_60	HLA-B39:01	HEEDAGVRCWEP	0.9895	0.923	SE	patient1
patient1_SE_60	HLA-A24:02	EEDAGVRCWEPG	0.9958	0.9526	SE	patient1
patient1_SE_60	HLA-A26:01	EEDAGVRCWEPG	0.9697	0.9657	SE	patient1
patient1_SE_60	HLA-B39:01	EEDAGVRCWEPG	0.9909	0.9461	SE	patient1
patient1_SE_60	HLA-A24:02	EDAGVRCWEPGP	0.9902	0.9338	SE	patient1
patient1_SE_60	HLA-A26:01	EDAGVRCWEPGP	0.9678	0.9606	SE	patient1
patient1_SE_60	HLA-A24:02	DAGVRCWEPGPG	0.995	0.9267	SE	patient1
patient1_SE_60	HLA-A26:01	DAGVRCWEPGPG	0.9184	0.922	SE	patient1
patient1_SE_60	HLA-B40:01	DAGVRCWEPGPG	0.9667	0.9189	SE	patient1
patient1_SE_60	HLA-B58:01	DAGVRCWEPGPG	0.9975	0.9102	SE	patient1
patient1_SE_60	HLA-A24:02	AGVRCWEPGPGP	0.9951	0.9399	SE	patient1
patient1_SE_60	HLA-B40:01	AGVRCWEPGPGP	0.9457	0.9465	SE	patient1
patient1_SE_60	HLA-B58:01	AGVRCWEPGPGP	0.9914	0.9324	SE	patient1
patient1_SE_60	HLA-A24:02	GVRCWEPGPGPP	0.9913	0.9335	SE	patient1
patient1_SE_60	HLA-B08:01	GVRCWEPGPGPP	0.9838	0.904	SE	patient1
patient1_SE_60	HLA-B40:01	GVRCWEPGPGPP	0.9136	0.9535	SE	patient1
patient1_SE_60	HLA-B58:01	GVRCWEPGPGPP	0.9786	0.9635	SE	patient1
patient1_SE_60	HLA-B15:01	GVRCWEPGPGPP	0.9991	0.9151	SE	patient1
patient1_SE_60	HLA-B39:01	VRCWEPGPGPPL	0.9988	0.9826	SE	patient1
patient1_SE_60	HLA-B40:01	VRCWEPGPGPPL	0.9813	0.9308	SE	patient1
patient1_SE_60	HLA-B58:01	VRCWEPGPGPPL	0.9903	0.9949	SE	patient1
patient1_SE_60	HLA-B15:01	VRCWEPGPGPPL	0.9973	0.9761	SE	patient1
patient1_SE_60	HLA-A24:02	RCWEPGPGPPLP	0.9969	0.9112	SE	patient1
patient1_SE_60	HLA-B40:01	RCWEPGPGPPLP	0.9765	0.9642	SE	patient1
patient1_SE_60	HLA-B58:01	RCWEPGPGPPLP	0.9959	0.9941	SE	patient1
patient1_SE_60	HLA-B15:01	RCWEPGPGPPLP	0.9986	0.9789	SE	patient1
patient1_SE_60	HLA-A03:01	CWEPGPGPPLPA	0.9567	0.9391	SE	patient1
patient1_SE_60	HLA-A24:02	CWEPGPGPPLPA	0.9987	0.945	SE	patient1
patient1_SE_60	HLA-A26:01	CWEPGPGPPLPA	0.9024	0.9709	SE	patient1
patient1_SE_60	HLA-B08:01	CWEPGPGPPLPA	0.9932	0.9205	SE	patient1
patient1_SE_60	HLA-B39:01	CWEPGPGPPLPA	0.9435	0.9945	SE	patient1
patient1_SE_60	HLA-B40:01	CWEPGPGPPLPA	0.9865	0.9828	SE	patient1
patient1_SE_60	HLA-B58:01	CWEPGPGPPLPA	0.9916	0.9942	SE	patient1
patient1_SE_60	HLA-B15:01	CWEPGPGPPLPA	0.9982	0.9781	SE	patient1
patient1_SE_60	HLA-A24:02	WEPGPGPPLPAA	0.9985	0.9199	SE	patient1
patient1_SE_60	HLA-A26:01	WEPGPGPPLPAA	0.9773	0.9681	SE	patient1
patient1_SE_60	HLA-B39:01	WEPGPGPPLPAA	0.9878	0.9903	SE	patient1
patient1_SE_60	HLA-B40:01	WEPGPGPPLPAA	0.9981	0.976	SE	patient1
patient1_SE_60	HLA-B58:01	WEPGPGPPLPAA	0.9965	0.9727	SE	patient1
patient1_SE_60	HLA-B15:01	WEPGPGPPLPAA	0.9999	0.9269	SE	patient1

patient1_SE_60	HLA-A24:02	AHEEDAGVRCWEP	0.9903	0.9107	SE	patient1
patient1_SE_60	HLA-A24:02	HEEDAGVRCWEPG	0.9752	0.9677	SE	patient1
patient1_SE_60	HLA-A26:01	HEEDAGVRCWEPG	0.9597	0.9736	SE	patient1
patient1_SE_60	HLA-B39:01	HEEDAGVRCWEPG	0.9808	0.9766	SE	patient1
patient1_SE_60	HLA-B40:01	HEEDAGVRCWEPG	0.9911	0.9264	SE	patient1
patient1_SE_60	HLA-B58:01	HEEDAGVRCWEPG	0.9942	0.9261	SE	patient1
patient1_SE_60	HLA-A24:02	EEDAGVRCWEPGP	0.993	0.9653	SE	patient1
patient1_SE_60	HLA-A26:01	EEDAGVRCWEPGP	0.9784	0.9657	SE	patient1
patient1_SE_60	HLA-B39:01	EEDAGVRCWEPGP	0.9562	0.9479	SE	patient1
patient1_SE_60	HLA-A24:02	EDAGVRCWEPGPG	0.9918	0.9694	SE	patient1
patient1_SE_60	HLA-A26:01	EDAGVRCWEPGPG	0.9897	0.9622	SE	patient1
patient1_SE_60	HLA-B40:01	EDAGVRCWEPGPG	0.9682	0.9128	SE	patient1
patient1_SE_60	HLA-A24:02	DAGVRCWEPGPGP	0.9971	0.9442	SE	patient1
patient1_SE_60	HLA-A26:01	DAGVRCWEPGPGP	0.937	0.901	SE	patient1
patient1_SE_60	HLA-B40:01	DAGVRCWEPGPGP	0.9725	0.9171	SE	patient1
patient1_SE_60	HLA-A24:02	AGVRCWEPGPGPP	0.9976	0.9395	SE	patient1
patient1_SE_60	HLA-B40:01	AGVRCWEPGPGPP	0.9592	0.9378	SE	patient1
patient1_SE_60	HLA-B58:01	AGVRCWEPGPGPP	0.9969	0.9242	SE	patient1
patient1_SE_60	HLA-A24:02	GVRCWEPGPGPPL	0.9989	0.9362	SE	patient1
patient1_SE_60	HLA-B08:01	GVRCWEPGPGPPL	0.9947	0.9328	SE	patient1
patient1_SE_60	HLA-B39:01	GVRCWEPGPGPPL	0.9771	0.9788	SE	patient1
patient1_SE_60	HLA-B40:01	GVRCWEPGPGPPL	0.9655	0.9619	SE	patient1
patient1_SE_60	HLA-B58:01	GVRCWEPGPGPPL	0.9816	0.9857	SE	patient1
patient1_SE_60	HLA-B15:01	GVRCWEPGPGPPL	0.9999	0.953	SE	patient1
patient1_SE_60	HLA-A24:02	VRCWEPGPGPPLP	0.9968	0.9201	SE	patient1
patient1_SE_60	HLA-B39:01	VRCWEPGPGPPLP	0.9252	0.9768	SE	patient1
patient1_SE_60	HLA-B40:01	VRCWEPGPGPPLP	0.9817	0.9457	SE	patient1
patient1_SE_60	HLA-B58:01	VRCWEPGPGPPLP	0.9968	0.9726	SE	patient1
patient1_SE_60	HLA-B15:01	VRCWEPGPGPPLP	0.9993	0.933	SE	patient1
patient1_SE_60	HLA-A24:02	RCWEPGPGPPLPA	0.991	0.9281	SE	patient1
patient1_SE_60	HLA-B39:01	RCWEPGPGPPLPA	0.9192	0.9855	SE	patient1
patient1_SE_60	HLA-B40:01	RCWEPGPGPPLPA	0.9833	0.9759	SE	patient1
patient1_SE_60	HLA-B58:01	RCWEPGPGPPLPA	0.9953	0.9918	SE	patient1
patient1_SE_60	HLA-B15:01	RCWEPGPGPPLPA	0.9956	0.9611	SE	patient1
patient1_SE_60	HLA-A03:01	CWEPGPGPPLPAA	0.9552	0.9304	SE	patient1
patient1_SE_60	HLA-A24:02	CWEPGPGPPLPAA	0.9995	0.9573	SE	patient1
patient1_SE_60	HLA-A26:01	CWEPGPGPPLPAA	0.9624	0.9707	SE	patient1
patient1_SE_60	HLA-B08:01	CWEPGPGPPLPAA	0.9953	0.9179	SE	patient1
patient1_SE_60	HLA-B39:01	CWEPGPGPPLPAA	0.9578	0.9946	SE	patient1
patient1_SE_60	HLA-B40:01	CWEPGPGPPLPAA	0.9927	0.9854	SE	patient1
patient1_SE_60	HLA-B58:01	CWEPGPGPPLPAA	0.9974	0.9934	SE	patient1

patient1_SE_60	HLA-B15:01	CWEPGPGPPLPAA	0.9995	0.9737	SE	patient1
patient1_SE_60	HLA-A24:02	WEPGPGPPLPAAP	0.9981	0.9546	SE	patient1
patient1_SE_60	HLA-A26:01	WEPGPGPPLPAAP	0.9797	0.9493	SE	patient1
patient1_SE_60	HLA-B40:01	WEPGPGPPLPAAP	0.9961	0.9705	SE	patient1
patient1_SE_60	HLA-B58:01	WEPGPGPPLPAAP	0.9814	0.9133	SE	patient1
patient1_SE_60	HLA-B39:01	AHEEDAGVRCWEPG	0.9218	0.9634	SE	patient1
patient1_SE_60	HLA-A24:02	HEEDAGVRCWEPGP	0.9125	0.9711	SE	patient1
patient1_SE_60	HLA-B40:01	HEEDAGVRCWEPGP	0.9789	0.9351	SE	patient1
patient1_SE_60	HLA-B58:01	HEEDAGVRCWEPGP	0.9746	0.9105	SE	patient1
patient1_SE_60	HLA-A24:02	EEDAGVRCWEPGPG	0.9737	0.9738	SE	patient1
patient1_SE_60	HLA-B40:01	EEDAGVRCWEPGPG	0.9222	0.9152	SE	patient1
patient1_SE_60	HLA-A24:02	EDAGVRCWEPGPGP	0.9727	0.9648	SE	patient1
patient1_SE_60	HLA-A24:02	DAGVRCWEPGPGPP	0.9809	0.9368	SE	patient1
patient1_SE_60	HLA-A24:02	AGVRCWEPGPGPPL	0.9946	0.9507	SE	patient1
patient1_SE_60	HLA-B08:01	AGVRCWEPGPGPPL	0.9451	0.9062	SE	patient1
patient1_SE_60	HLA-B39:01	AGVRCWEPGPGPPL	0.9354	0.9643	SE	patient1
patient1_SE_60	HLA-B58:01	AGVRCWEPGPGPPL	0.9732	0.9643	SE	patient1
patient1_SE_60	HLA-A24:02	GVRCWEPGPGPPLP	0.9786	0.9125	SE	patient1
patient1_SE_60	HLA-A24:02	VRCWEPGPGPPLPA	0.9836	0.9147	SE	patient1
patient1_SE_60	HLA-B39:01	VRCWEPGPGPPLPA	0.9358	0.9378	SE	patient1
patient1_SE_60	HLA-B58:01	VRCWEPGPGPPLPA	0.9682	0.9305	SE	patient1
patient1_SE_60	HLA-A24:02	RCWEPGPGPPLPAA	0.9619	0.9312	SE	patient1
patient1_SE_60	HLA-B58:01	RCWEPGPGPPLPAA	0.9898	0.9837	SE	patient1
patient1_SE_60	HLA-B15:01	RCWEPGPGPPLPAA	0.9924	0.9294	SE	patient1
patient1_SE_60	HLA-A24:02	CWEPGPGPPLPAAP	0.9984	0.9577	SE	patient1
patient1_SE_60	HLA-B58:01	CWEPGPGPPLPAAP	0.9637	0.9764	SE	patient1
patient1_SE_60	HLA-B15:01	CWEPGPGPPLPAAP	0.9614	0.9392	SE	patient1
patient1_SE_60	HLA-A24:02	WEPGPGPPLPAAPF	0.9889	0.9227	SE	patient1
patient1_SE_61	HLA-B58:01	STSEMAFSGI	0.9292	0.9589	SE	patient1
patient1_SE_61	HLA-B27:05	SYPGFSTSEMA	0.9909	0.9144	SE	patient1
patient1_SE_61	HLA-B58:01	SYPGFSTSEMA	0.9563	0.9128	SE	patient1
patient1_SE_61	HLA-B15:01	SYPGFSTSEMA	0.9929	0.9445	SE	patient1
patient1_SE_61	HLA-B15:01	YPGFSTSEMAF	0.9406	0.9218	SE	patient1
patient1_SE_61	HLA-B15:01	PGFSTSEMAFS	0.9816	0.9167	SE	patient1
patient1_SE_61	HLA-B15:01	GFSTSEMAFSG	0.9786	0.9684	SE	patient1
patient1_SE_61	HLA-B58:01	FSTSEMAFSGI	0.9685	0.9571	SE	patient1
patient1_SE_61	HLA-B15:01	FSTSEMAFSGI	0.9084	0.9851	SE	patient1
patient1_SE_61	HLA-B15:01	STSEMAFSGIY	0.9896	0.9141	SE	patient1
patient1_SE_61	HLA-B39:01	SSYPGFSTSEMA	0.9473	0.9532	SE	patient1
patient1_SE_61	HLA-B58:01	SSYPGFSTSEMA	0.9972	0.9286	SE	patient1
patient1_SE_61	HLA-B15:01	SSYPGFSTSEMA	0.9995	0.9516	SE	patient1

patient1_SE_61	HLA-B27:05	SYPGFSTSEMAF	0.9542	0.9207	SE	patient1
patient1_SE_61	HLA-B15:01	SYPGFSTSEMAF	0.993	0.9431	SE	patient1
patient1_SE_61	HLA-B39:01	YPGFSTSEMAFS	0.9024	0.938	SE	patient1
patient1_SE_61	HLA-B15:01	YPGFSTSEMAFS	0.9964	0.9064	SE	patient1
patient1_SE_61	HLA-B08:01	PGFSTSEMAFSG	0.9564	0.9001	SE	patient1
patient1_SE_61	HLA-B15:01	PGFSTSEMAFSG	0.9982	0.9048	SE	patient1
patient1_SE_61	HLA-B58:01	GFSTSEMAFSGI	0.9551	0.9735	SE	patient1
patient1_SE_61	HLA-B15:01	GFSTSEMAFSGI	0.9305	0.9763	SE	patient1
patient1_SE_61	HLA-B27:05	FSTSEMAFSGIY	0.9667	0.9047	SE	patient1
patient1_SE_61	HLA-B15:01	FSTSEMAFSGIY	0.999	0.9138	SE	patient1
patient1_SE_61	HLA-B27:05	STSEMAFSGIYK	0.974	0.9039	SE	patient1
patient1_SE_61	HLA-B15:01	TSEMAFSGIYKL	0.9451	0.909	SE	patient1
patient1_SE_61	HLA-B39:01	FSSYPGFSTSEMA	0.9656	0.9391	SE	patient1
patient1_SE_61	HLA-B58:01	FSSYPGFSTSEMA	0.9979	0.9223	SE	patient1
patient1_SE_61	HLA-B15:01	FSSYPGFSTSEMA	0.9998	0.9553	SE	patient1
patient1_SE_61	HLA-B39:01	SSYPGFSTSEMAF	0.955	0.9448	SE	patient1
patient1_SE_61	HLA-B58:01	SSYPGFSTSEMAF	0.9975	0.9331	SE	patient1
patient1_SE_61	HLA-B15:01	SSYPGFSTSEMAF	0.9998	0.9629	SE	patient1
patient1_SE_61	HLA-B15:01	SYPGFSTSEMAFS	0.9924	0.9157	SE	patient1
patient1_SE_61	HLA-A26:01	YPGFSTSEMAFSG	0.9306	0.9426	SE	patient1
patient1_SE_61	HLA-B39:01	YPGFSTSEMAFSG	0.9677	0.9486	SE	patient1
patient1_SE_61	HLA-B58:01	YPGFSTSEMAFSG	0.9823	0.9218	SE	patient1
patient1_SE_61	HLA-B08:01	PGFSTSEMAFSGI	0.9019	0.9239	SE	patient1
patient1_SE_61	HLA-B15:01	PGFSTSEMAFSGI	0.9741	0.9181	SE	patient1
patient1_SE_61	HLA-B15:01	GFSTSEMAFSGIY	0.9987	0.938	SE	patient1
patient1_SE_61	HLA-B27:05	FSTSEMAFSGIYK	0.9972	0.914	SE	patient1
patient1_SE_61	HLA-B58:01	FSTSEMAFSGIYK	0.9777	0.9299	SE	patient1
patient1_SE_61	HLA-B15:01	FSTSEMAFSGIYK	0.9886	0.9432	SE	patient1
patient1_SE_61	HLA-B27:05	STSEMAFSGIYKL	0.9936	0.9047	SE	patient1
patient1_SE_61	HLA-B58:01	STSEMAFSGIYKL	0.9971	0.9315	SE	patient1
patient1_SE_61	HLA-B15:01	STSEMAFSGIYKL	0.9937	0.9488	SE	patient1
patient1_SE_61	HLA-A26:01	EMAFSGIYKLDDG	0.9845	0.9281	SE	patient1
patient1_SE_61	HLA-B08:01	EMAFSGIYKLDDG	0.9856	0.9774	SE	patient1
patient1_SE_61	HLA-B58:01	EMAFSGIYKLDDG	0.9923	0.9596	SE	patient1
patient1_SE_61	HLA-B15:01	EMAFSGIYKLDDG	0.999	0.9594	SE	patient1
patient1_SE_61	HLA-B58:01	VFSSYPGFSTSEMA	0.9525	0.9419	SE	patient1
patient1_SE_61	HLA-B15:01	VFSSYPGFSTSEMA	0.9643	0.9458	SE	patient1
patient1_SE_61	HLA-B58:01	FSSYPGFSTSEMAF	0.9889	0.9409	SE	patient1
patient1_SE_61	HLA-B15:01	FSSYPGFSTSEMAF	0.9976	0.9692	SE	patient1
patient1_SE_61	HLA-B58:01	SSYPGFSTSEMAFS	0.9843	0.9098	SE	patient1
patient1_SE_61	HLA-B58:01	SYPGFSTSEMAFSG	0.9183	0.9657	SE	patient1

patient1_SE_61	HLA-B15:01	SYPGFSTSEMAFSG	0.9656	0.901	SE	patient1
patient1_SE_61	HLA-B58:01	YPGFSTSEMAFSGI	0.9627	0.9635	SE	patient1
patient1_SE_61	HLA-B15:01	PGFSTSEMAFSGIY	0.9945	0.9301	SE	patient1
patient1_SE_61	HLA-B58:01	GFSTSEMAFSGIYK	0.9506	0.9587	SE	patient1
patient1_SE_61	HLA-B15:01	GFSTSEMAFSGIYK	0.9418	0.9569	SE	patient1
patient1_SE_61	HLA-B58:01	FSTSEMAFSGIYKL	0.9991	0.9667	SE	patient1
patient1_SE_61	HLA-B15:01	FSTSEMAFSGIYKL	0.999	0.9798	SE	patient1
patient1_SE_61	HLA-B58:01	STSEMAFSGIYKLD	0.995	0.9179	SE	patient1
patient1_SE_61	HLA-B15:01	STSEMAFSGIYKLD	0.9854	0.9035	SE	patient1
patient1_SE_61	HLA-B58:01	TSEMAFSGIYKLDD	0.9949	0.9512	SE	patient1
patient1_SE_61	HLA-B15:01	TSEMAFSGIYKLDD	0.9902	0.9009	SE	patient1
patient1_SE_61	HLA-A24:02	SEMAFSGIYKLDDG	0.9864	0.9271	SE	patient1
patient1_SE_61	HLA-B08:01	SEMAFSGIYKLDDG	0.9364	0.9813	SE	patient1
patient1_SE_61	HLA-B58:01	SEMAFSGIYKLDDG	0.9913	0.9825	SE	patient1
patient1_SE_61	HLA-B15:01	SEMAFSGIYKLDDG	0.9989	0.973	SE	patient1
patient1_SE_61	HLA-A26:01	EMAFSGIYKLDDGK	0.9628	0.9355	SE	patient1
patient1_SE_61	HLA-B08:01	EMAFSGIYKLDDGK	0.9199	0.9765	SE	patient1
patient1_SE_61	HLA-B58:01	EMAFSGIYKLDDGK	0.9806	0.9681	SE	patient1
patient1_SE_61	HLA-B15:01	EMAFSGIYKLDDGK	0.9966	0.9447	SE	patient1
patient1_SE_62	HLA-B58:01	ATPEAGQGHW	0.9922	0.9738	SE	patient1
patient1_SE_62	HLA-B39:01	SEAEATPEAGQ	0.9716	0.9335	SE	patient1
patient1_SE_62	HLA-B58:01	SEAEATPEAGQ	0.9941	0.9534	SE	patient1
patient1_SE_62	HLA-B39:01	EAEATPEAGQG	0.983	0.9549	SE	patient1
patient1_SE_62	HLA-B58:01	EAEATPEAGQG	0.9965	0.9174	SE	patient1
patient1_SE_62	HLA-B58:01	EATPEAGQGHW	0.9932	0.955	SE	patient1
patient1_SE_62	HLA-B58:01	ATPEAGQGHWL	0.9419	0.9725	SE	patient1
patient1_SE_62	HLA-B15:01	ATPEAGQGHWL	0.9879	0.9518	SE	patient1
patient1_SE_62	HLA-B58:01	PEAGQGHWLVV	0.9428	0.979	SE	patient1
patient1_SE_62	HLA-B58:01	SEAEATPEAGQG	0.9991	0.9423	SE	patient1
patient1_SE_62	HLA-A24:02	AEATPEAGQGHW	0.9992	0.9043	SE	patient1
patient1_SE_62	HLA-B39:01	AEATPEAGQGHW	0.9861	0.9476	SE	patient1
patient1_SE_62	HLA-B58:01	AEATPEAGQGHW	0.9995	0.9282	SE	patient1
patient1_SE_62	HLA-B39:01	EATPEAGQGHWL	0.9841	0.9621	SE	patient1
patient1_SE_62	HLA-B58:01	ATPEAGQGHWLV	0.9035	0.9663	SE	patient1
patient1_SE_62	HLA-B15:01	ATPEAGQGHWLV	0.9392	0.9157	SE	patient1
patient1_SE_62	HLA-B58:01	TPEAGQGHWLVV	0.9425	0.9727	SE	patient1
patient1_SE_62	HLA-A26:01	DPSEAEATPEAGQ	0.9969	0.9174	SE	patient1
patient1_SE_62	HLA-B39:01	DPSEAEATPEAGQ	0.9651	0.9145	SE	patient1
patient1_SE_62	HLA-A24:02	EAEATPEAGQGHW	0.9953	0.9271	SE	patient1
patient1_SE_62	HLA-A26:01	EAEATPEAGQGHW	0.9862	0.9351	SE	patient1
patient1_SE_62	HLA-B39:01	EAEATPEAGQGHW	0.9507	0.9726	SE	patient1

patient1_SE_62	HLA-B39:01	AEATPEAGQGHWL	0.9969	0.9268	SE	patient1
patient1_SE_62	HLA-A24:02	EATPEAGQGHWLV	0.9728	0.9003	SE	patient1
patient1_SE_62	HLA-B40:01	ATPEAGQGHWLVV	0.9164	0.934	SE	patient1
patient1_SE_62	HLA-B58:01	ATPEAGQGHWLVV	0.9827	0.9356	SE	patient1
patient1_SE_62	HLA-A24:02	ADPSEAEATPEAGQ	0.94	0.9305	SE	patient1
patient1_SE_62	HLA-B40:01	ADPSEAEATPEAGQ	0.9563	0.9042	SE	patient1
patient1_SE_62	HLA-A26:01	DPSEAEATPEAGQG	0.9342	0.9094	SE	patient1
patient1_SE_62	HLA-B58:01	SEAEATPEAGQGHW	0.9945	0.9362	SE	patient1
patient1_SE_62	HLA-A24:02	EAEATPEAGQGHWL	0.9915	0.9178	SE	patient1
patient1_SE_62	HLA-B39:01	EAEATPEAGQGHWL	0.9269	0.9594	SE	patient1
patient1_SE_62	HLA-A24:02	EATPEAGQGHWLVV	0.9284	0.9356	SE	patient1
patient1_SE_62	HLA-A26:01	EATPEAGQGHWLVV	0.982	0.9023	SE	patient1
patient1_SE_62	HLA-A24:02	EAGQGHWLVVQKGN	0.9774	0.9296	SE	patient1
patient1_SE_62	HLA-B39:01	AGQGHWLVVQKGNL	0.9531	0.9244	SE	patient1
patient1_SE_64	HLA-B15:01	QMAFSGIYKL	0.9811	0.9067	SE	patient1
patient1_SE_64	HLA-B08:01	RQMAFSGIYKLDD	0.9118	0.9061	SE	patient1
patient1_SE_64	HLA-B58:01	RQMAFSGIYKLDD	0.9753	0.9257	SE	patient1
patient1_SE_64	HLA-B08:01	QMAFSGIYKLDDG	0.9758	0.9689	SE	patient1
patient1_SE_64	HLA-B40:01	QMAFSGIYKLDDG	0.9173	0.9287	SE	patient1
patient1_SE_64	HLA-B58:01	QMAFSGIYKLDDG	0.9852	0.9588	SE	patient1
patient1_SE_64	HLA-B15:01	QMAFSGIYKLDDG	0.9996	0.9406	SE	patient1
patient1_SE_64	HLA-B08:01	RRRRQMAFSGIYKL	0.9439	0.9278	SE	patient1
patient1_SE_64	HLA-B58:01	RRQMAFSGIYKLDD	0.9339	0.9017	SE	patient1
patient1_SE_64	HLA-A24:02	RQMAFSGIYKLDDG	0.9804	0.9291	SE	patient1
patient1_SE_64	HLA-B40:01	RQMAFSGIYKLDDG	0.9211	0.9157	SE	patient1
patient1_SE_64	HLA-B58:01	RQMAFSGIYKLDDG	0.9816	0.9561	SE	patient1
patient1_SE_64	HLA-B15:01	RQMAFSGIYKLDDG	0.9991	0.9115	SE	patient1
patient1_SE_64	HLA-B58:01	QMAFSGIYKLDDGK	0.9833	0.9597	SE	patient1
patient1_SE_64	HLA-B15:01	QMAFSGIYKLDDGK	0.9981	0.9316	SE	patient1
patient1_SE_66	HLA-B15:01	CTFVQMPEQE	0.9104	0.9855	SE	patient1
patient1_SE_66	HLA-B15:01	FVQMPEQERQ	0.9615	0.9381	SE	patient1
patient1_SE_66	HLA-B15:01	VQMPEQERQI	0.9822	0.9328	SE	patient1
patient1_SE_66	HLA-B15:01	QMPEQERQIT	0.92	0.9713	SE	patient1
patient1_SE_66	HLA-A24:02	LCTFVQMPEQE	0.9038	0.9421	SE	patient1
patient1_SE_66	HLA-B27:05	LCTFVQMPEQE	0.9934	0.914	SE	patient1
patient1_SE_66	HLA-B15:01	CTFVQMPEQER	0.9309	0.9862	SE	patient1
patient1_SE_66	HLA-A24:02	TFVQMPEQERQ	0.9024	0.9386	SE	patient1
patient1_SE_66	HLA-B58:01	TFVQMPEQERQ	0.9341	0.9914	SE	patient1
patient1_SE_66	HLA-B15:01	TFVQMPEQERQ	0.9782	0.9692	SE	patient1
patient1_SE_66	HLA-B15:01	FVQMPEQERQI	0.9874	0.9528	SE	patient1
patient1_SE_66	HLA-B15:01	VQMPEQERQIT	0.996	0.9453	SE	patient1

patient1_SE_66	HLA-B15:01	QMPEQERQITA	0.9831	0.967	SE	patient1
patient1_SE_66	HLA-A24:02	ILCTFVQMPEQE	0.9369	0.9705	SE	patient1
patient1_SE_66	HLA-B15:01	ILCTFVQMPEQE	0.9779	0.9826	SE	patient1
patient1_SE_66	HLA-A24:02	LCTFVQMPEQER	0.9615	0.9216	SE	patient1
patient1_SE_66	HLA-B08:01	LCTFVQMPEQER	0.9036	0.9739	SE	patient1
patient1_SE_66	HLA-B27:05	LCTFVQMPEQER	0.997	0.9059	SE	patient1
patient1_SE_66	HLA-B40:01	LCTFVQMPEQER	0.9617	0.9323	SE	patient1
patient1_SE_66	HLA-B58:01	LCTFVQMPEQER	0.9782	0.9953	SE	patient1
patient1_SE_66	HLA-B15:01	LCTFVQMPEQER	0.9904	0.9878	SE	patient1
patient1_SE_66	HLA-A24:02	CTFVQMPEQERQ	0.9867	0.9495	SE	patient1
patient1_SE_66	HLA-B58:01	CTFVQMPEQERQ	0.9672	0.9921	SE	patient1
patient1_SE_66	HLA-B15:01	CTFVQMPEQERQ	0.9894	0.9827	SE	patient1
patient1_SE_66	HLA-A24:02	TFVQMPEQERQI	0.998	0.9187	SE	patient1
patient1_SE_66	HLA-B58:01	TFVQMPEQERQI	0.9841	0.9891	SE	patient1
patient1_SE_66	HLA-B15:01	TFVQMPEQERQI	0.9794	0.9746	SE	patient1
patient1_SE_66	HLA-A24:02	FVQMPEQERQIT	0.958	0.918	SE	patient1
patient1_SE_66	HLA-B08:01	FVQMPEQERQIT	0.9341	0.9512	SE	patient1
patient1_SE_66	HLA-B58:01	FVQMPEQERQIT	0.97	0.9851	SE	patient1
patient1_SE_66	HLA-B15:01	FVQMPEQERQIT	0.997	0.9669	SE	patient1
patient1_SE_66	HLA-B08:01	VQMPEQERQITA	0.9174	0.9312	SE	patient1
patient1_SE_66	HLA-B58:01	VQMPEQERQITA	0.9402	0.9726	SE	patient1
patient1_SE_66	HLA-B15:01	VQMPEQERQITA	0.9993	0.9341	SE	patient1
patient1_SE_66	HLA-B58:01	QMPEQERQITAR	0.9597	0.9894	SE	patient1
patient1_SE_66	HLA-B15:01	QMPEQERQITAR	0.9931	0.9701	SE	patient1
patient1_SE_66	HLA-B15:01	LIFFILCTFVQMP	0.9164	0.944	SE	patient1
patient1_SE_66	HLA-B27:05	IFFILCTFVQMPE	0.9733	0.9309	SE	patient1
patient1_SE_66	HLA-B58:01	IFFILCTFVQMPE	0.9472	0.9759	SE	patient1
patient1_SE_66	HLA-B15:01	FFILCTFVQMPEQ	0.9264	0.9823	SE	patient1
patient1_SE_66	HLA-B58:01	FILCTFVQMPEQE	0.9401	0.9939	SE	patient1
patient1_SE_66	HLA-B15:01	FILCTFVQMPEQE	0.9873	0.9861	SE	patient1
patient1_SE_66	HLA-A24:02	ILCTFVQMPEQER	0.9934	0.9804	SE	patient1
patient1_SE_66	HLA-B58:01	ILCTFVQMPEQER	0.9678	0.9926	SE	patient1
patient1_SE_66	HLA-B15:01	ILCTFVQMPEQER	0.9945	0.9815	SE	patient1
patient1_SE_66	HLA-A24:02	LCTFVQMPEQERQ	0.9932	0.967	SE	patient1
patient1_SE_66	HLA-A26:01	LCTFVQMPEQERQ	0.9407	0.904	SE	patient1
patient1_SE_66	HLA-B08:01	LCTFVQMPEQERQ	0.9406	0.9746	SE	patient1
patient1_SE_66	HLA-B40:01	LCTFVQMPEQERQ	0.9678	0.9651	SE	patient1
patient1_SE_66	HLA-B58:01	LCTFVQMPEQERQ	0.9882	0.991	SE	patient1
patient1_SE_66	HLA-B15:01	LCTFVQMPEQERQ	0.9983	0.9746	SE	patient1
patient1_SE_66	HLA-A24:02	CTFVQMPEQERQI	0.9967	0.9597	SE	patient1
patient1_SE_66	HLA-B08:01	CTFVQMPEQERQI	0.9151	0.9745	SE	patient1

patient1_SE_66	HLA-B58:01	CTFVQMPEQERQI	0.989	0.9935	SE	patient1
patient1_SE_66	HLA-B15:01	CTFVQMPEQERQI	0.9941	0.9848	SE	patient1
patient1_SE_66	HLA-A24:02	TFVQMPEQERQIT	0.9866	0.9442	SE	patient1
patient1_SE_66	HLA-B08:01	TFVQMPEQERQIT	0.9189	0.9632	SE	patient1
patient1_SE_66	HLA-B58:01	TFVQMPEQERQIT	0.9678	0.9896	SE	patient1
patient1_SE_66	HLA-B15:01	TFVQMPEQERQIT	0.9912	0.9769	SE	patient1
patient1_SE_66	HLA-A24:02	FVQMPEQERQITA	0.9886	0.9127	SE	patient1
patient1_SE_66	HLA-B08:01	FVQMPEQERQITA	0.9791	0.9523	SE	patient1
patient1_SE_66	HLA-B58:01	FVQMPEQERQITA	0.9848	0.972	SE	patient1
patient1_SE_66	HLA-B15:01	FVQMPEQERQITA	0.9991	0.9496	SE	patient1
patient1_SE_66	HLA-B08:01	VQMPEQERQITAR	0.9005	0.9407	SE	patient1
patient1_SE_66	HLA-B39:01	VQMPEQERQITAR	0.9118	0.9806	SE	patient1
patient1_SE_66	HLA-B58:01	VQMPEQERQITAR	0.9913	0.9744	SE	patient1
patient1_SE_66	HLA-B15:01	VQMPEQERQITAR	0.9997	0.9493	SE	patient1
patient1_SE_66	HLA-B08:01	QMPEQERQITARE	0.9697	0.9361	SE	patient1
patient1_SE_66	HLA-B40:01	QMPEQERQITARE	0.9516	0.963	SE	patient1
patient1_SE_66	HLA-B58:01	QMPEQERQITARE	0.9773	0.9931	SE	patient1
patient1_SE_66	HLA-B15:01	QMPEQERQITARE	0.9995	0.9808	SE	patient1
patient1_SE_66	HLA-B15:01	NLIFFILCTFVQMPE	0.9198	0.9362	SE	patient1
patient1_SE_66	HLA-B15:01	LIFFILCTFVQMPE	0.9615	0.97	SE	patient1
patient1_SE_66	HLA-B15:01	IFFILCTFVQMPEQ	0.93	0.9696	SE	patient1
patient1_SE_66	HLA-B15:01	FFILCTFVQMPEQE	0.9124	0.9845	SE	patient1
patient1_SE_66	HLA-A24:02	FILCTFVQMPEQER	0.9925	0.9245	SE	patient1
patient1_SE_66	HLA-B58:01	FILCTFVQMPEQER	0.9742	0.9877	SE	patient1
patient1_SE_66	HLA-B15:01	FILCTFVQMPEQER	0.9937	0.971	SE	patient1
patient1_SE_66	HLA-A24:02	ILCTFVQMPEQERQ	0.9882	0.9813	SE	patient1
patient1_SE_66	HLA-B40:01	ILCTFVQMPEQERQ	0.9067	0.9059	SE	patient1
patient1_SE_66	HLA-B58:01	ILCTFVQMPEQERQ	0.9815	0.9768	SE	patient1
patient1_SE_66	HLA-B15:01	ILCTFVQMPEQERQ	0.9969	0.956	SE	patient1
patient1_SE_66	HLA-A24:02	LCTFVQMPEQERQI	0.9857	0.9777	SE	patient1
patient1_SE_66	HLA-B58:01	LCTFVQMPEQERQI	0.9756	0.9929	SE	patient1
patient1_SE_66	HLA-B15:01	LCTFVQMPEQERQI	0.9932	0.9799	SE	patient1
patient1_SE_66	HLA-A24:02	CTFVQMPEQERQIT	0.9771	0.9664	SE	patient1
patient1_SE_66	HLA-B58:01	CTFVQMPEQERQIT	0.9785	0.9926	SE	patient1
patient1_SE_66	HLA-B15:01	CTFVQMPEQERQIT	0.9821	0.9828	SE	patient1
patient1_SE_66	HLA-A24:02	TFVQMPEQERQITA	0.9979	0.9295	SE	patient1
patient1_SE_66	HLA-B58:01	TFVQMPEQERQITA	0.9596	0.9835	SE	patient1
patient1_SE_66	HLA-B15:01	TFVQMPEQERQITA	0.9875	0.9632	SE	patient1
patient1_SE_66	HLA-A24:02	FVQMPEQERQITAR	0.9852	0.954	SE	patient1
patient1_SE_66	HLA-B08:01	FVQMPEQERQITAR	0.9445	0.9717	SE	patient1
patient1_SE_66	HLA-B58:01	FVQMPEQERQITAR	0.9896	0.9693	SE	patient1

patient1_SE_66	HLA-B15:01	FVQMPEQERQITAR	0.9984	0.9522	SE	patient1
patient1_SE_66	HLA-B58:01	VQMPEQERQITARE	0.9758	0.9782	SE	patient1
patient1_SE_66	HLA-B15:01	VQMPEQERQITARE	0.9998	0.9673	SE	patient1
patient1_SE_66	HLA-B58:01	QMPEQERQITAREG	0.9409	0.9813	SE	patient1
patient1_SE_66	HLA-B15:01	QMPEQERQITAREG	0.9984	0.9437	SE	patient1
patient1_SE_72	HLA-B15:01	ATLDPPHTVH	0.9649	0.9529	SE	patient1
patient1_SE_72	HLA-B15:01	TLDPPHTVHS	0.9355	0.9139	SE	patient1
patient1_SE_72	HLA-B58:01	LATLDPPHTVH	0.9804	0.9624	SE	patient1
patient1_SE_72	HLA-B15:01	LATLDPPHTVH	0.9991	0.9394	SE	patient1
patient1_SE_72	HLA-B58:01	ATLDPPHTVHS	0.9399	0.9462	SE	patient1
patient1_SE_72	HLA-B58:01	HTVHSAPKEVA	0.9084	0.961	SE	patient1
patient1_SE_72	HLA-B58:01	TLATLDPPHTVH	0.9371	0.977	SE	patient1
patient1_SE_72	HLA-B15:01	TLATLDPPHTVH	0.9997	0.9391	SE	patient1
patient1_SE_72	HLA-B58:01	LATLDPPHTVHS	0.9923	0.9453	SE	patient1
patient1_SE_72	HLA-B58:01	HTVHSAPKEVAV	0.9809	0.9531	SE	patient1
patient1_SE_72	HLA-B58:01	TLATLDPPHTVHS	0.9639	0.9004	SE	patient1
patient1_SE_72	HLA-B58:01	TVHSAPKEVAVSK	0.9868	0.909	SE	patient1
patient1_SE_74	HLA-B15:01	TAAAGYMGTA	0.9274	0.9525	SE	patient1
patient1_SE_74	HLA-B27:05	AAGYMGTARI	0.9793	0.9023	SE	patient1
patient1_SE_74	HLA-B15:01	YMG TARIAPG	0.9461	0.919	SE	patient1
patient1_SE_74	HLA-B15:01	ATAAAGYMGTA	0.9796	0.9292	SE	patient1
patient1_SE_74	HLA-B58:01	AAAGYMG TARI	0.9212	0.9843	SE	patient1
patient1_SE_74	HLA-B15:01	AAAGYMG TARI	0.973	0.9537	SE	patient1
patient1_SE_74	HLA-B27:05	AAGYMG TARIA	0.9867	0.9091	SE	patient1
patient1_SE_74	HLA-B15:01	AAGYMG TARIA	0.9562	0.9668	SE	patient1
patient1_SE_74	HLA-B15:01	AGYMG TARIAP	0.9635	0.9613	SE	patient1
patient1_SE_74	HLA-B15:01	GYMG TARIAPG	0.9821	0.9589	SE	patient1
patient1_SE_74	HLA-B58:01	PATAAAGYMGTA	0.9828	0.9413	SE	patient1
patient1_SE_74	HLA-B58:01	TAAAGYMG TARI	0.993	0.9845	SE	patient1
patient1_SE_74	HLA-B15:01	TAAAGYMG TARI	0.9904	0.9458	SE	patient1
patient1_SE_74	HLA-B58:01	AAAGYMG TARIA	0.9737	0.988	SE	patient1
patient1_SE_74	HLA-B15:01	AAAGYMG TARIA	0.9972	0.9705	SE	patient1
patient1_SE_74	HLA-B58:01	AAGYMG TARIAP	0.9587	0.979	SE	patient1
patient1_SE_74	HLA-B15:01	AAGYMG TARIAP	0.9864	0.9652	SE	patient1
patient1_SE_74	HLA-B58:01	AGYMG TARIAPG	0.9945	0.9726	SE	patient1
patient1_SE_74	HLA-B15:01	AGYMG TARIAPG	0.9987	0.9397	SE	patient1
patient1_SE_74	HLA-B39:01	GYMG TARIAPGL	0.9138	0.9233	SE	patient1
patient1_SE_74	HLA-B58:01	GYMG TARIAPGL	0.992	0.9442	SE	patient1
patient1_SE_74	HLA-B15:01	GYMG TARIAPGL	0.9981	0.9378	SE	patient1
patient1_SE_74	HLA-A26:01	PATAAAGYMG TAR	0.9545	0.9115	SE	patient1
patient1_SE_74	HLA-B58:01	PATAAAGYMG TAR	0.9443	0.9536	SE	patient1

patient1_SE_74	HLA-A24:02	ATAAAGYMGRTARI	0.997	0.9276	SE	patient1
patient1_SE_74	HLA-B58:01	ATAAAGYMGRTARI	0.998	0.9855	SE	patient1
patient1_SE_74	HLA-B15:01	ATAAAGYMGRTARI	0.9987	0.9646	SE	patient1
patient1_SE_74	HLA-A24:02	TAAAGYMGRTARIA	0.9961	0.9179	SE	patient1
patient1_SE_74	HLA-B39:01	TAAAGYMGRTARIA	0.9825	0.9627	SE	patient1
patient1_SE_74	HLA-B40:01	TAAAGYMGRTARIA	0.9711	0.9456	SE	patient1
patient1_SE_74	HLA-B58:01	TAAAGYMGRTARIA	0.9962	0.9872	SE	patient1
patient1_SE_74	HLA-B15:01	TAAAGYMGRTARIA	0.9993	0.9667	SE	patient1
patient1_SE_74	HLA-A24:02	AAAGYMGRTARIAP	0.9966	0.9091	SE	patient1
patient1_SE_74	HLA-A26:01	AAAGYMGRTARIAP	0.9033	0.9012	SE	patient1
patient1_SE_74	HLA-B40:01	AAAGYMGRTARIAP	0.9539	0.9413	SE	patient1
patient1_SE_74	HLA-B58:01	AAAGYMGRTARIAP	0.9966	0.9776	SE	patient1
patient1_SE_74	HLA-B15:01	AAAGYMGRTARIAP	0.9992	0.9654	SE	patient1
patient1_SE_74	HLA-B40:01	AAGYMGRTARIAPG	0.9658	0.9134	SE	patient1
patient1_SE_74	HLA-B58:01	AAGYMGRTARIAPG	0.9972	0.9643	SE	patient1
patient1_SE_74	HLA-B15:01	AAGYMGRTARIAPG	0.9996	0.9248	SE	patient1
patient1_SE_74	HLA-B39:01	AGYMGRTARIAPGL	0.9315	0.9115	SE	patient1
patient1_SE_74	HLA-B58:01	AGYMGRTARIAPGL	0.9979	0.9586	SE	patient1
patient1_SE_74	HLA-B15:01	AGYMGRTARIAPGL	0.9998	0.9194	SE	patient1
patient1_SE_74	HLA-B58:01	GYMGRTARIAPGLA	0.9986	0.9419	SE	patient1
patient1_SE_74	HLA-B58:01	YMGRTARIAPGLAL	0.9516	0.928	SE	patient1
patient1_SE_74	HLA-A24:02	APPPATAAAGYMG	0.9138	0.9219	SE	patient1
patient1_SE_74	HLA-A24:02	PPATAAAGYMGRTAR	0.9813	0.9309	SE	patient1
patient1_SE_74	HLA-A26:01	PPATAAAGYMGRTAR	0.949	0.9025	SE	patient1
patient1_SE_74	HLA-A24:02	PATAAAGYMGRTARI	0.9975	0.9607	SE	patient1
patient1_SE_74	HLA-A26:01	PATAAAGYMGRTARI	0.9257	0.9415	SE	patient1
patient1_SE_74	HLA-B08:01	PATAAAGYMGRTARI	0.9815	0.9286	SE	patient1
patient1_SE_74	HLA-B58:01	PATAAAGYMGRTARI	0.997	0.9636	SE	patient1
patient1_SE_74	HLA-B15:01	PATAAAGYMGRTARI	0.9906	0.9072	SE	patient1
patient1_SE_74	HLA-A24:02	ATAAAGYMGRTARIA	0.9945	0.938	SE	patient1
patient1_SE_74	HLA-B58:01	ATAAAGYMGRTARIA	0.9928	0.9808	SE	patient1
patient1_SE_74	HLA-B15:01	ATAAAGYMGRTARIA	0.9982	0.9247	SE	patient1
patient1_SE_74	HLA-A24:02	TAAAGYMGRTARIAP	0.9916	0.9428	SE	patient1
patient1_SE_74	HLA-B58:01	TAAAGYMGRTARIAP	0.9911	0.9592	SE	patient1
patient1_SE_74	HLA-B15:01	TAAAGYMGRTARIAP	0.9955	0.9397	SE	patient1
patient1_SE_74	HLA-A24:02	AAAGYMGRTARIAPG	0.9944	0.9371	SE	patient1
patient1_SE_74	HLA-B58:01	AAAGYMGRTARIAPG	0.9929	0.9318	SE	patient1
patient1_SE_74	HLA-B15:01	AAAGYMGRTARIAPG	0.999	0.9251	SE	patient1
patient1_SE_74	HLA-B58:01	AAGYMGRTARIAPGL	0.9905	0.9444	SE	patient1
patient1_SE_75	HLA-B15:01	RLVGRAVY	0.9985	0.9139	SE	patient1
patient1_SE_75	HLA-B27:05	GRAVYLSN	0.9964	0.9393	SE	patient1

patient1_SE_75	HLA-B15:01	FRLVGRAFYVY	0.9457	0.9302	SE	patient1
patient1_SE_75	HLA-B15:01	RLVGRAFYVYL	0.977	0.9081	SE	patient1
patient1_SE_75	HLA-B27:05	WFRLVGRAFYVY	0.9601	0.9082	SE	patient1
patient1_SE_75	HLA-B15:01	WFRLVGRAFYVY	0.9792	0.948	SE	patient1
patient1_SE_75	HLA-B27:05	FRLVGRAFYVYL	1	0.9109	SE	patient1
patient1_SE_75	HLA-B15:01	FRLVGRAFYVYL	0.9042	0.9166	SE	patient1
patient1_SE_75	HLA-B39:01	DRFPWFRLVGRA	0.9714	0.9415	SE	patient1
patient1_SE_75	HLA-B15:01	DRFPWFRLVGRA	0.9488	0.9063	SE	patient1
patient1_SE_75	HLA-B15:01	PWFRLVGRAFYVY	0.9972	0.9071	SE	patient1
patient1_SE_75	HLA-B15:01	WFRLVGRAFYVYL	0.9582	0.9497	SE	patient1
patient1_SE_75	HLA-A24:02	YDRFPWFRLVGRA	0.9461	0.9467	SE	patient1
patient1_SE_75	HLA-B15:01	PWFRLVGRAFYVYL	0.9912	0.9091	SE	patient1
patient1_SE_75	HLA-B15:01	WFRLVGRAFYVYLS	0.923	0.917	SE	patient1
patient1_SE_75	HLA-B39:01	FRLVGRAFYVYLSN	0.9012	0.9574	SE	patient1
patient1_SE_75	HLA-B15:01	FRLVGRAFYVYLSN	0.9839	0.9267	SE	patient1
patient1_SE_75	HLA-B15:01	RLVGRAFYVYLSNL	0.9987	0.9106	SE	patient1
patient1_SE_75	HLA-A24:02	FYDRFPWFRLVGRA	0.9945	0.9512	SE	patient1
patient1_SE_75	HLA-A24:02	YDRFPWFRLVGRA	0.9927	0.9359	SE	patient1
patient1_SE_75	HLA-A26:01	YDRFPWFRLVGRA	0.9163	0.912	SE	patient1
patient1_SE_75	HLA-B39:01	YDRFPWFRLVGRA	0.9479	0.9455	SE	patient1
patient1_SE_75	HLA-A24:02	DRFPWFRLVGRA	0.9072	0.9179	SE	patient1
patient1_SE_75	HLA-B39:01	DRFPWFRLVGRA	0.9014	0.9516	SE	patient1
patient1_SE_75	HLA-A24:02	RFPWFRLVGRAFYVY	0.9882	0.9085	SE	patient1
patient1_SE_75	HLA-B58:01	RFPWFRLVGRAFYVY	0.9554	0.9154	SE	patient1
patient1_SE_75	HLA-B15:01	RFPWFRLVGRAFYVY	0.9952	0.9319	SE	patient1
patient1_SE_75	HLA-B08:01	FPWFRLVGRAFYVYL	0.9956	0.9383	SE	patient1
patient1_SE_75	HLA-B39:01	FPWFRLVGRAFYVYL	0.9825	0.9754	SE	patient1
patient1_SE_75	HLA-B15:01	FPWFRLVGRAFYVYL	0.9459	0.9269	SE	patient1
patient1_SE_75	HLA-A24:02	FRLVGRAFYVYLSNL	0.9908	0.9355	SE	patient1
patient1_SE_75	HLA-B08:01	FRLVGRAFYVYLSNL	0.9713	0.9423	SE	patient1
patient1_SE_75	HLA-B39:01	FRLVGRAFYVYLSNL	0.9939	0.9813	SE	patient1
patient1_SE_75	HLA-B15:01	FRLVGRAFYVYLSNL	0.9823	0.959	SE	patient1
patient1_SE_75	HLA-B15:01	RLVGRAFYVYLSNLL	0.997	0.9096	SE	patient1
patient1_SE_75	HLA-B15:01	VGRAFYVYLSNLLYP	0.9512	0.9207	SE	patient1
patient1_SE_79	HLA-B15:01	AVSAVKMM	0.9573	0.9504	SE	patient1
patient1_SE_79	HLA-B15:01	AVKMMRGVEG	0.948	0.9257	SE	patient1
patient1_SE_79	HLA-B15:01	SAVKMMRGVE	0.9275	0.9136	SE	patient1
patient1_SE_79	HLA-B15:01	AAVKMMRGVEG	0.9824	0.919	SE	patient1
patient1_SE_79	HLA-B15:01	AVKMMRGVEGP	0.9441	0.9152	SE	patient1
patient1_SE_79	HLA-B15:01	KMMRGVEGPQG	0.9971	0.9344	SE	patient1
patient1_SE_79	HLA-B58:01	NVPAVSAVKMM	0.9473	0.9246	SE	patient1

patient1_SE_79	HLA-B58:01	AAVKMMRGVEGP	0.9824	0.9394	SE	patient1
patient1_SE_79	HLA-B15:01	AAVKMMRGVEGP	0.9799	0.9121	SE	patient1
patient1_SE_79	HLA-B08:01	VKMMRGVEGPQG	0.9884	0.9203	SE	patient1
patient1_SE_79	HLA-B39:01	VKMMRGVEGPQG	0.9577	0.952	SE	patient1
patient1_SE_79	HLA-B08:01	KMMRGVEGPQGS	0.9583	0.9257	SE	patient1
patient1_SE_79	HLA-B58:01	KMMRGVEGPQGS	0.9401	0.9167	SE	patient1
patient1_SE_79	HLA-B15:01	KMMRGVEGPQGS	0.9993	0.9565	SE	patient1
patient1_SE_79	HLA-B39:01	GNVPAVSAAVKMM	0.9933	0.9669	SE	patient1
patient1_SE_79	HLA-B58:01	GNVPAVSAAVKMM	0.9957	0.9582	SE	patient1
patient1_SE_79	HLA-A24:02	VSAAVKMMRGVEG	0.9931	0.9082	SE	patient1
patient1_SE_79	HLA-B08:01	AVKMMRGVEGPQG	0.9829	0.909	SE	patient1
patient1_SE_79	HLA-B39:01	VKMMRGVEGPQGS	0.9491	0.93	SE	patient1
patient1_SE_79	HLA-A24:02	KMMRGVEGPQGS	0.9938	0.9213	SE	patient1
patient1_SE_79	HLA-B08:01	KMMRGVEGPQGS	0.9754	0.9046	SE	patient1
patient1_SE_79	HLA-B58:01	KMMRGVEGPQGS	0.9793	0.9144	SE	patient1
patient1_SE_79	HLA-A24:02	YGNVPAVSAAVKMM	0.9939	0.9124	SE	patient1
patient1_SE_79	HLA-B39:01	YGNVPAVSAAVKMM	0.95	0.9776	SE	patient1
patient1_SE_79	HLA-B58:01	YGNVPAVSAAVKMM	0.9903	0.9358	SE	patient1
patient1_SE_79	HLA-A24:02	VPAVSAAVKMMRGV	0.9683	0.9236	SE	patient1
patient1_SE_79	HLA-A24:02	AVSAAVKMMRGVEG	0.9504	0.9172	SE	patient1
patient1_SE_79	HLA-A24:02	VSAAVKMMRGVEGP	0.9741	0.9015	SE	patient1
patient1_SE_80	HLA-B27:05	KEPEEFSKMD	0.9175	0.9162	SE	patient1
patient1_SE_80	HLA-B15:01	KEPEEFSKMD	0.9789	0.9613	SE	patient1
patient1_SE_80	HLA-B27:05	IKEPEEFSKMD	0.9983	0.9116	SE	patient1
patient1_SE_80	HLA-B39:01	IKEPEEFSKMD	0.9676	0.9295	SE	patient1
patient1_SE_80	HLA-B58:01	IKEPEEFSKMD	0.9986	0.9333	SE	patient1
patient1_SE_80	HLA-B15:01	IKEPEEFSKMD	0.9998	0.9516	SE	patient1
patient1_SE_80	HLA-B15:01	KEPEEFSKMDS	0.9994	0.9168	SE	patient1
patient1_SE_80	HLA-B58:01	DIKEPEEFSKMD	0.9974	0.9418	SE	patient1
patient1_SE_80	HLA-B15:01	DIKEPEEFSKMD	0.9998	0.9436	SE	patient1
patient1_SE_80	HLA-B15:01	IKEPEEFSKMDS	0.9999	0.9171	SE	patient1
patient1_SE_80	HLA-B39:01	KEPEEFSKMDSQ	0.9921	0.9409	SE	patient1
patient1_SE_80	HLA-B58:01	KEPEEFSKMDSQ	0.9982	0.9584	SE	patient1
patient1_SE_80	HLA-B15:01	KEPEEFSKMDSQ	0.9999	0.9403	SE	patient1
patient1_SE_80	HLA-B15:01	EPEEFSKMDSQK	0.9995	0.9097	SE	patient1
patient1_SE_80	HLA-B39:01	SKMDSQKYCFKE	0.9927	0.9511	SE	patient1
patient1_SE_80	HLA-B27:05	LDIKEPEEFSKMD	0.9997	0.9342	SE	patient1
patient1_SE_80	HLA-B39:01	LDIKEPEEFSKMD	0.9586	0.9805	SE	patient1
patient1_SE_80	HLA-B58:01	LDIKEPEEFSKMD	0.999	0.9513	SE	patient1
patient1_SE_80	HLA-B15:01	LDIKEPEEFSKMD	0.9998	0.9677	SE	patient1
patient1_SE_80	HLA-B58:01	DIKEPEEFSKMDS	0.9966	0.9211	SE	patient1

patient1_SE_80	HLA-B15:01	DIKEPEEFSKMDS	0.9996	0.9528	SE	patient1
patient1_SE_80	HLA-B27:05	IKEPEEFSKMDSQ	0.9998	0.9006	SE	patient1
patient1_SE_80	HLA-B39:01	IKEPEEFSKMDSQ	0.9957	0.9688	SE	patient1
patient1_SE_80	HLA-B58:01	IKEPEEFSKMDSQ	0.9983	0.9678	SE	patient1
patient1_SE_80	HLA-B15:01	IKEPEEFSKMDSQ	0.9999	0.9508	SE	patient1
patient1_SE_80	HLA-B27:05	KEPEEFSKMDSQK	0.9998	0.936	SE	patient1
patient1_SE_80	HLA-B39:01	KEPEEFSKMDSQK	0.9885	0.9758	SE	patient1
patient1_SE_80	HLA-B58:01	KEPEEFSKMDSQK	0.9974	0.9739	SE	patient1
patient1_SE_80	HLA-B15:01	KEPEEFSKMDSQK	0.9997	0.9735	SE	patient1
patient1_SE_80	HLA-B15:01	EPEEFSKMDSQKY	0.9996	0.9033	SE	patient1
patient1_SE_80	HLA-B08:01	PEEFSKMDSQKYC	0.9915	0.9133	SE	patient1
patient1_SE_80	HLA-B27:05	PEEFSKMDSQKYC	0.9993	0.9344	SE	patient1
patient1_SE_80	HLA-B39:01	PEEFSKMDSQKYC	0.9924	0.9715	SE	patient1
patient1_SE_80	HLA-B58:01	PEEFSKMDSQKYC	0.9991	0.9525	SE	patient1
patient1_SE_80	HLA-B15:01	PEEFSKMDSQKYC	0.9988	0.9589	SE	patient1
patient1_SE_80	HLA-B15:01	EFSKMDSQKYCFK	0.9893	0.9019	SE	patient1
patient1_SE_80	HLA-B27:05	FSKMDSQKYCFKE	0.9987	0.9395	SE	patient1
patient1_SE_80	HLA-B39:01	FSKMDSQKYCFKE	0.931	0.9746	SE	patient1
patient1_SE_80	HLA-B58:01	FSKMDSQKYCFKE	0.9971	0.9413	SE	patient1
patient1_SE_80	HLA-B15:01	FSKMDSQKYCFKE	0.9994	0.9401	SE	patient1
patient1_SE_80	HLA-B39:01	SKMDSQKYCFKEN	0.9704	0.9007	SE	patient1
patient1_SE_80	HLA-B39:01	KMDSQKYCFKENE	0.9067	0.9632	SE	patient1
patient1_SE_80	HLA-B27:05	SLDIKEPEEFSKMD	0.9969	0.9436	SE	patient1
patient1_SE_80	HLA-B58:01	SLDIKEPEEFSKMD	0.9916	0.9391	SE	patient1
patient1_SE_80	HLA-B15:01	SLDIKEPEEFSKMD	0.9991	0.9585	SE	patient1
patient1_SE_80	HLA-B58:01	LDIKEPEEFSKMDS	0.9811	0.9508	SE	patient1
patient1_SE_80	HLA-B15:01	LDIKEPEEFSKMDS	0.9838	0.9571	SE	patient1
patient1_SE_80	HLA-B58:01	DIKEPEEFSKMDSQ	0.9766	0.9763	SE	patient1
patient1_SE_80	HLA-B15:01	DIKEPEEFSKMDSQ	0.9995	0.9797	SE	patient1
patient1_SE_80	HLA-B27:05	IKEPEEFSKMDSQK	0.9994	0.9323	SE	patient1
patient1_SE_80	HLA-B39:01	IKEPEEFSKMDSQK	0.9885	0.9838	SE	patient1
patient1_SE_80	HLA-B58:01	IKEPEEFSKMDSQK	0.9937	0.9836	SE	patient1
patient1_SE_80	HLA-B15:01	IKEPEEFSKMDSQK	0.9994	0.969	SE	patient1
patient1_SE_80	HLA-B27:05	KEPEEFSKMDSQKY	0.9991	0.9183	SE	patient1
patient1_SE_80	HLA-B58:01	KEPEEFSKMDSQKY	0.9948	0.9338	SE	patient1
patient1_SE_80	HLA-B15:01	KEPEEFSKMDSQKY	0.9998	0.9626	SE	patient1
patient1_SE_80	HLA-B08:01	EPEEFSKMDSQKYC	0.9612	0.9459	SE	patient1
patient1_SE_80	HLA-B58:01	EPEEFSKMDSQKYC	0.9888	0.9882	SE	patient1
patient1_SE_80	HLA-B15:01	EPEEFSKMDSQKYC	0.9883	0.9666	SE	patient1
patient1_SE_80	HLA-B08:01	PEEFSKMDSQKYCF	0.9592	0.9346	SE	patient1
patient1_SE_80	HLA-B27:05	PEEFSKMDSQKYCF	0.9979	0.9194	SE	patient1

patient1_SE_80	HLA-B39:01	PEEFKMSQKYCF	0.9213	0.9613	SE	patient1
patient1_SE_80	HLA-B58:01	PEEFKMSQKYCF	0.9948	0.9656	SE	patient1
patient1_SE_80	HLA-B15:01	PEEFKMSQKYCF	0.9987	0.9631	SE	patient1
patient1_SE_80	HLA-B27:05	EEFSKMSQKYCFK	0.9953	0.9488	SE	patient1
patient1_SE_80	HLA-B39:01	EEFSKMSQKYCFK	0.9075	0.9696	SE	patient1
patient1_SE_80	HLA-B58:01	EEFSKMSQKYCFK	0.9763	0.9751	SE	patient1
patient1_SE_80	HLA-B15:01	EEFSKMSQKYCFK	0.993	0.9696	SE	patient1
patient1_SE_80	HLA-B27:05	EFSKMSQKYCFKE	0.9898	0.9499	SE	patient1
patient1_SE_80	HLA-B58:01	EFSKMSQKYCFKE	0.9344	0.9684	SE	patient1
patient1_SE_80	HLA-B15:01	EFSKMSQKYCFKE	0.9243	0.9619	SE	patient1
patient1_SE_80	HLA-B27:05	FSKMSQKYCFKEN	0.9889	0.9427	SE	patient1
patient1_SE_80	HLA-B58:01	FSKMSQKYCFKEN	0.9879	0.949	SE	patient1
patient1_SE_80	HLA-B15:01	FSKMSQKYCFKEN	0.9936	0.9566	SE	patient1
patient1_SE_80	HLA-B27:05	SKMSQKYCFKENE	0.9931	0.9151	SE	patient1
patient1_SE_80	HLA-B39:01	SKMSQKYCFKENE	0.9409	0.9695	SE	patient1
patient1_SE_80	HLA-B58:01	SKMSQKYCFKENE	0.9459	0.9599	SE	patient1
patient1_SE_80	HLA-B15:01	SKMSQKYCFKENE	0.9821	0.9609	SE	patient1
patient1_SE_80	HLA-B58:01	KMSQKYCFKENEN	0.9933	0.9275	SE	patient1
patient1_SE_80	HLA-B15:01	KMSQKYCFKENEN	0.9931	0.9298	SE	patient1
patient1_SE_81	HLA-B15:01	FSKMSQKEA	0.974	0.9393	SE	patient1
patient1_SE_81	HLA-B58:01	EFSKMSQKEA	0.9334	0.9048	SE	patient1
patient1_SE_81	HLA-B15:01	EFSKMSQKEA	0.9941	0.9164	SE	patient1
patient1_SE_81	HLA-B27:05	FSKMSQKEAL	0.9991	0.9058	SE	patient1
patient1_SE_81	HLA-B15:01	FSKMSQKEAL	0.9997	0.9266	SE	patient1
patient1_SE_81	HLA-B39:01	SKMSQKEALQ	0.9976	0.9297	SE	patient1
patient1_SE_81	HLA-B58:01	SKMSQKEALQ	0.9954	0.9356	SE	patient1
patient1_SE_81	HLA-B58:01	KMSQKEALQR	0.97	0.962	SE	patient1
patient1_SE_81	HLA-B15:01	KMSQKEALQR	0.9854	0.9451	SE	patient1
patient1_SE_81	HLA-B39:01	PEEFKMSQKE	0.9905	0.9076	SE	patient1
patient1_SE_81	HLA-B39:01	EEFSKMSQKEA	0.9964	0.9344	SE	patient1
patient1_SE_81	HLA-B15:01	EEFSKMSQKEA	0.9999	0.9119	SE	patient1
patient1_SE_81	HLA-B39:01	EFSKMSQKEAL	0.9666	0.9273	SE	patient1
patient1_SE_81	HLA-B58:01	EFSKMSQKEAL	0.9792	0.9162	SE	patient1
patient1_SE_81	HLA-B15:01	EFSKMSQKEAL	0.9985	0.9303	SE	patient1
patient1_SE_81	HLA-B27:05	FSKMSQKEALQ	0.9997	0.9056	SE	patient1
patient1_SE_81	HLA-B39:01	FSKMSQKEALQ	0.9802	0.9794	SE	patient1
patient1_SE_81	HLA-B58:01	FSKMSQKEALQ	0.9991	0.9733	SE	patient1
patient1_SE_81	HLA-B15:01	FSKMSQKEALQ	0.9998	0.9677	SE	patient1
patient1_SE_81	HLA-B27:05	SKMSQKEALQR	0.9997	0.9097	SE	patient1
patient1_SE_81	HLA-B39:01	SKMSQKEALQR	0.9974	0.9555	SE	patient1
patient1_SE_81	HLA-B58:01	SKMSQKEALQR	0.9988	0.9582	SE	patient1

patient1_SE_81	HLA-B15:01	SKMDSQKEALQR	0.9991	0.9552	SE	patient1
patient1_SE_81	HLA-B39:01	KMDSQKEALQRI	0.9141	0.9704	SE	patient1
patient1_SE_81	HLA-B58:01	KMDSQKEALQRI	0.9993	0.924	SE	patient1
patient1_SE_81	HLA-B15:01	KMDSQKEALQRI	0.9993	0.9309	SE	patient1
patient1_SE_81	HLA-B39:01	EPEEFSKMDSQKE	0.9863	0.9264	SE	patient1
patient1_SE_81	HLA-B58:01	EPEEFSKMDSQKE	0.9976	0.9068	SE	patient1
patient1_SE_81	HLA-B15:01	EPEEFSKMDSQKE	0.9996	0.9239	SE	patient1
patient1_SE_81	HLA-B39:01	PEEFSKMDSQKEA	0.9958	0.9586	SE	patient1
patient1_SE_81	HLA-B58:01	PEEFSKMDSQKEA	0.9992	0.9546	SE	patient1
patient1_SE_81	HLA-B15:01	PEEFSKMDSQKEA	0.9997	0.9407	SE	patient1
patient1_SE_81	HLA-B39:01	EEFSKMDSQKEAL	0.9983	0.9518	SE	patient1
patient1_SE_81	HLA-B58:01	EEFSKMDSQKEAL	0.9976	0.9285	SE	patient1
patient1_SE_81	HLA-B15:01	EEFSKMDSQKEAL	0.9999	0.9339	SE	patient1
patient1_SE_81	HLA-B27:05	EFSKMDSQKEALQ	0.9997	0.9136	SE	patient1
patient1_SE_81	HLA-B39:01	EFSKMDSQKEALQ	0.9644	0.9824	SE	patient1
patient1_SE_81	HLA-B58:01	EFSKMDSQKEALQ	0.996	0.9771	SE	patient1
patient1_SE_81	HLA-B15:01	EFSKMDSQKEALQ	0.9998	0.9708	SE	patient1
patient1_SE_81	HLA-B27:05	FSKMDSQKEALQR	0.9986	0.9376	SE	patient1
patient1_SE_81	HLA-B39:01	FSKMDSQKEALQR	0.9644	0.9819	SE	patient1
patient1_SE_81	HLA-B58:01	FSKMDSQKEALQR	0.9984	0.9785	SE	patient1
patient1_SE_81	HLA-B15:01	FSKMDSQKEALQR	0.9996	0.9805	SE	patient1
patient1_SE_81	HLA-B39:01	SKMDSQKEALQRI	0.9992	0.9754	SE	patient1
patient1_SE_81	HLA-B58:01	SKMDSQKEALQRI	0.9993	0.9607	SE	patient1
patient1_SE_81	HLA-B15:01	SKMDSQKEALQRI	0.9956	0.9632	SE	patient1
patient1_SE_81	HLA-B39:01	KMDSQKEALQR II	0.9388	0.9827	SE	patient1
patient1_SE_81	HLA-B58:01	KMDSQKEALQR II	0.9996	0.9493	SE	patient1
patient1_SE_81	HLA-B15:01	KMDSQKEALQR II	0.9997	0.9445	SE	patient1
patient1_SE_81	HLA-B27:05	KEPEEFSKMDSQKE	0.9977	0.9117	SE	patient1
patient1_SE_81	HLA-B39:01	KEPEEFSKMDSQKE	0.932	0.9742	SE	patient1
patient1_SE_81	HLA-B58:01	KEPEEFSKMDSQKE	0.9931	0.9789	SE	patient1
patient1_SE_81	HLA-B15:01	KEPEEFSKMDSQKE	0.9987	0.9728	SE	patient1
patient1_SE_81	HLA-B39:01	EPEEFSKMDSQKEA	0.9564	0.9669	SE	patient1
patient1_SE_81	HLA-B58:01	EPEEFSKMDSQKEA	0.9905	0.9713	SE	patient1
patient1_SE_81	HLA-B15:01	EPEEFSKMDSQKEA	0.9986	0.9561	SE	patient1
patient1_SE_81	HLA-B39:01	PEEFSKMDSQKEAL	0.9905	0.974	SE	patient1
patient1_SE_81	HLA-B58:01	PEEFSKMDSQKEAL	0.9903	0.9811	SE	patient1
patient1_SE_81	HLA-B15:01	PEEFSKMDSQKEAL	0.9991	0.9696	SE	patient1
patient1_SE_81	HLA-B08:01	EEFSKMDSQKEALQ	0.9947	0.958	SE	patient1
patient1_SE_81	HLA-B27:05	EEFSKMDSQKEALQ	0.9985	0.9255	SE	patient1
patient1_SE_81	HLA-B39:01	EEFSKMDSQKEALQ	0.9942	0.9836	SE	patient1
patient1_SE_81	HLA-B58:01	EEFSKMDSQKEALQ	0.996	0.9891	SE	patient1

patient1_SE_81	HLA-B15:01	EEFSKMDSQKEALQ	0.9999	0.9822	SE	patient1
patient1_SE_81	HLA-A24:02	EFSKMDSQKEALQR	0.9976	0.9477	SE	patient1
patient1_SE_81	HLA-A26:01	EFSKMDSQKEALQR	0.9624	0.9659	SE	patient1
patient1_SE_81	HLA-B08:01	EFSKMDSQKEALQR	0.9577	0.9693	SE	patient1
patient1_SE_81	HLA-B27:05	EFSKMDSQKEALQR	0.9962	0.9565	SE	patient1
patient1_SE_81	HLA-B39:01	EFSKMDSQKEALQR	0.9206	0.9896	SE	patient1
patient1_SE_81	HLA-B58:01	EFSKMDSQKEALQR	0.9817	0.9913	SE	patient1
patient1_SE_81	HLA-B15:01	EFSKMDSQKEALQR	0.9915	0.9904	SE	patient1
patient1_SE_81	HLA-B08:01	FSKMDSQKEALQRI	0.997	0.9007	SE	patient1
patient1_SE_81	HLA-B27:05	FSKMDSQKEALQRI	0.9978	0.953	SE	patient1
patient1_SE_81	HLA-B39:01	FSKMDSQKEALQRI	0.9684	0.9896	SE	patient1
patient1_SE_81	HLA-B58:01	FSKMDSQKEALQRI	0.9997	0.9891	SE	patient1
patient1_SE_81	HLA-B15:01	FSKMDSQKEALQRI	0.9999	0.9863	SE	patient1
patient1_SE_81	HLA-B39:01	SKMDSQKEALQRRII	0.9981	0.983	SE	patient1
patient1_SE_81	HLA-B58:01	SKMDSQKEALQRRII	0.996	0.9772	SE	patient1
patient1_SE_81	HLA-B15:01	SKMDSQKEALQRRII	0.9787	0.9714	SE	patient1
patient1_SE_81	HLA-B58:01	KMDSQKEALQRRIIS	0.9964	0.9849	SE	patient1
patient1_SE_81	HLA-B15:01	KMDSQKEALQRRIIS	0.9988	0.9831	SE	patient1
patient1_SE_84	HLA-B39:01	LHCPGEPAM	0.9986	0.9743	SE	patient1
patient1_SE_84	HLA-B27:05	FAAGLHCPGE	0.9339	0.963	SE	patient1
patient1_SE_84	HLA-B15:01	FAAGLHCPGE	0.976	0.9678	SE	patient1
patient1_SE_84	HLA-B27:05	AAGLHCPGEP	0.9227	0.9165	SE	patient1
patient1_SE_84	HLA-B15:01	AAGLHCPGEP	0.9561	0.9779	SE	patient1
patient1_SE_84	HLA-B15:01	AGLHCPGEP	0.9538	0.9594	SE	patient1
patient1_SE_84	HLA-B15:01	GLHCPGEPAM	0.9979	0.934	SE	patient1
patient1_SE_84	HLA-B08:01	GFAAGLHCPGE	0.9339	0.939	SE	patient1
patient1_SE_84	HLA-B27:05	GFAAGLHCPGE	0.9969	0.9118	SE	patient1
patient1_SE_84	HLA-B58:01	GFAAGLHCPGE	0.9625	0.9922	SE	patient1
patient1_SE_84	HLA-B15:01	GFAAGLHCPGE	0.996	0.9562	SE	patient1
patient1_SE_84	HLA-B08:01	FAAGLHCPGEP	0.9517	0.9081	SE	patient1
patient1_SE_84	HLA-B27:05	FAAGLHCPGEP	0.9991	0.9329	SE	patient1
patient1_SE_84	HLA-B58:01	FAAGLHCPGEP	0.9596	0.9915	SE	patient1
patient1_SE_84	HLA-B15:01	FAAGLHCPGEP	0.9978	0.9465	SE	patient1
patient1_SE_84	HLA-B15:01	AAGLHCPGEP	0.9974	0.9653	SE	patient1
patient1_SE_84	HLA-B27:05	AGLHCPGEPAM	0.9968	0.9036	SE	patient1
patient1_SE_84	HLA-B58:01	AGLHCPGEPAM	0.933	0.9886	SE	patient1
patient1_SE_84	HLA-B15:01	AGLHCPGEPAM	0.9986	0.9607	SE	patient1
patient1_SE_84	HLA-B15:01	GLHCPGEPAMR	0.9313	0.9431	SE	patient1
patient1_SE_84	HLA-B39:01	LHCPGEPAMRG	0.9918	0.9594	SE	patient1
patient1_SE_84	HLA-B58:01	LHCPGEPAMRG	0.9891	0.9771	SE	patient1
patient1_SE_84	HLA-B15:01	LHCPGEPAMRG	0.9988	0.9535	SE	patient1

patient1_SE_84	HLA-B08:01	AGFAAGLHCPGE	0.9878	0.9493	SE	patient1
patient1_SE_84	HLA-B40:01	AGFAAGLHCPGE	0.9824	0.9531	SE	patient1
patient1_SE_84	HLA-B58:01	AGFAAGLHCPGE	0.9974	0.9928	SE	patient1
patient1_SE_84	HLA-B15:01	AGFAAGLHCPGE	0.9993	0.9587	SE	patient1
patient1_SE_84	HLA-B08:01	GFAAGLHCPGEP	0.987	0.9249	SE	patient1
patient1_SE_84	HLA-B40:01	GFAAGLHCPGEP	0.9472	0.9547	SE	patient1
patient1_SE_84	HLA-B58:01	GFAAGLHCPGEP	0.9882	0.9883	SE	patient1
patient1_SE_84	HLA-B15:01	GFAAGLHCPGEP	0.9968	0.9475	SE	patient1
patient1_SE_84	HLA-A24:02	FAAGLHCPGEPA	0.9916	0.9148	SE	patient1
patient1_SE_84	HLA-B08:01	FAAGLHCPGEPA	0.9937	0.9067	SE	patient1
patient1_SE_84	HLA-B39:01	FAAGLHCPGEPA	0.9748	0.9858	SE	patient1
patient1_SE_84	HLA-B40:01	FAAGLHCPGEPA	0.9774	0.9545	SE	patient1
patient1_SE_84	HLA-B58:01	FAAGLHCPGEPA	0.9877	0.9898	SE	patient1
patient1_SE_84	HLA-B15:01	FAAGLHCPGEPA	0.9995	0.9415	SE	patient1
patient1_SE_84	HLA-B39:01	AAGLHCPGEPAM	0.9458	0.9691	SE	patient1
patient1_SE_84	HLA-B58:01	AAGLHCPGEPAM	0.9714	0.9881	SE	patient1
patient1_SE_84	HLA-B15:01	AAGLHCPGEPAM	0.999	0.954	SE	patient1
patient1_SE_84	HLA-A24:02	AGLHCPGEPAMR	0.9967	0.9306	SE	patient1
patient1_SE_84	HLA-A26:01	AGLHCPGEPAMR	0.9611	0.9607	SE	patient1
patient1_SE_84	HLA-B08:01	AGLHCPGEPAMR	0.9694	0.9244	SE	patient1
patient1_SE_84	HLA-B40:01	AGLHCPGEPAMR	0.9788	0.9788	SE	patient1
patient1_SE_84	HLA-B58:01	AGLHCPGEPAMR	0.9962	0.9798	SE	patient1
patient1_SE_84	HLA-B15:01	AGLHCPGEPAMR	0.9988	0.9465	SE	patient1
patient1_SE_84	HLA-B58:01	GLHCPGEPAMRG	0.9815	0.9761	SE	patient1
patient1_SE_84	HLA-B15:01	GLHCPGEPAMRG	0.9989	0.9584	SE	patient1
patient1_SE_84	HLA-B39:01	LHCPGEPAMRGY	0.9621	0.9589	SE	patient1
patient1_SE_84	HLA-B58:01	LHCPGEPAMRGY	0.9813	0.9403	SE	patient1
patient1_SE_84	HLA-B39:01	HCPGEPAMRGYL	0.9723	0.9173	SE	patient1
patient1_SE_84	HLA-B08:01	PAGFAAGLHCPGE	0.9607	0.9135	SE	patient1
patient1_SE_84	HLA-B39:01	PAGFAAGLHCPGE	0.9204	0.9655	SE	patient1
patient1_SE_84	HLA-B40:01	PAGFAAGLHCPGE	0.9458	0.9058	SE	patient1
patient1_SE_84	HLA-B58:01	PAGFAAGLHCPGE	0.9963	0.9711	SE	patient1
patient1_SE_84	HLA-B08:01	AGFAAGLHCPGEP	0.9856	0.9447	SE	patient1
patient1_SE_84	HLA-B40:01	AGFAAGLHCPGEP	0.9709	0.9666	SE	patient1
patient1_SE_84	HLA-B58:01	AGFAAGLHCPGEP	0.9982	0.9825	SE	patient1
patient1_SE_84	HLA-B15:01	AGFAAGLHCPGEP	0.9997	0.9436	SE	patient1
patient1_SE_84	HLA-A24:02	GFAAGLHCPGEPA	0.9975	0.9083	SE	patient1
patient1_SE_84	HLA-B08:01	GFAAGLHCPGEPA	0.9964	0.9303	SE	patient1
patient1_SE_84	HLA-B39:01	GFAAGLHCPGEPA	0.9779	0.9796	SE	patient1
patient1_SE_84	HLA-B40:01	GFAAGLHCPGEPA	0.9801	0.9773	SE	patient1
patient1_SE_84	HLA-B58:01	GFAAGLHCPGEPA	0.9931	0.9814	SE	patient1

patient1_SE_84	HLA-B15:01	GFAAGLHCPGEPA	0.9995	0.9259	SE	patient1
patient1_SE_84	HLA-B39:01	FAAGLHCPGEPAM	0.9955	0.9747	SE	patient1
patient1_SE_84	HLA-B40:01	FAAGLHCPGEPAM	0.9662	0.9318	SE	patient1
patient1_SE_84	HLA-B58:01	FAAGLHCPGEPAM	0.9909	0.9829	SE	patient1
patient1_SE_84	HLA-B15:01	FAAGLHCPGEPAM	0.9998	0.9108	SE	patient1
patient1_SE_84	HLA-A24:02	AAGLHCPGEPAMR	0.9957	0.9619	SE	patient1
patient1_SE_84	HLA-A26:01	AAGLHCPGEPAMR	0.972	0.9573	SE	patient1
patient1_SE_84	HLA-B08:01	AAGLHCPGEPAMR	0.9785	0.9505	SE	patient1
patient1_SE_84	HLA-B40:01	AAGLHCPGEPAMR	0.9673	0.9817	SE	patient1
patient1_SE_84	HLA-B58:01	AAGLHCPGEPAMR	0.9969	0.9863	SE	patient1
patient1_SE_84	HLA-B15:01	AAGLHCPGEPAMR	0.9949	0.9647	SE	patient1
patient1_SE_84	HLA-A24:02	AGLHCPGEPAMRG	0.9934	0.9565	SE	patient1
patient1_SE_84	HLA-A26:01	AGLHCPGEPAMRG	0.9538	0.9277	SE	patient1
patient1_SE_84	HLA-B08:01	AGLHCPGEPAMRG	0.9707	0.9302	SE	patient1
patient1_SE_84	HLA-B40:01	AGLHCPGEPAMRG	0.9436	0.9767	SE	patient1
patient1_SE_84	HLA-B58:01	AGLHCPGEPAMRG	0.9967	0.9776	SE	patient1
patient1_SE_84	HLA-B15:01	AGLHCPGEPAMRG	0.9991	0.9364	SE	patient1
patient1_SE_84	HLA-B08:01	GLHCPGEPAMRGY	0.9084	0.9463	SE	patient1
patient1_SE_84	HLA-B58:01	GLHCPGEPAMRGY	0.9667	0.9808	SE	patient1
patient1_SE_84	HLA-B15:01	GLHCPGEPAMRGY	1	0.9543	SE	patient1
patient1_SE_84	HLA-B39:01	LHCPGEPAMRGYL	0.9994	0.9598	SE	patient1
patient1_SE_84	HLA-A24:02	LPAGFAAGLHCPGE	0.9565	0.9594	SE	patient1
patient1_SE_84	HLA-B15:01	LPAGFAAGLHCPGE	0.9777	0.9112	SE	patient1
patient1_SE_84	HLA-A24:02	AGFAAGLHCPGEPA	0.9877	0.9241	SE	patient1
patient1_SE_84	HLA-B58:01	AGFAAGLHCPGEPA	0.9856	0.953	SE	patient1
patient1_SE_84	HLA-A24:02	GFAAGLHCPGEPAM	0.9981	0.9322	SE	patient1