



nHLAPred
A neural network based MHC Class-I Binding Peptide Prediction Server

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Antigen Name	Untitled
Scanned on	Mon Feb 1 13:31:16 2010
Length of input sequence	806 amino acids
Number of nonamers from input sequence	798
Threshold setting	.5
Number of alleles in query	67
Number of top scorers to be displayed	4
Number of top scorers to be displayed	4
Proteosome Filter	on at 5 threshold
ImmunoProteosome Filter	on at 5 threshold

ALLELE: HLA-A1				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IAELPAAAG	543	1.000
ANNs+QM	2	GIEPADFAD	573	1.000
ANNs+QM	3	AADETLAAL	561	0.950
ANNs+QM	4	LADTTGARL	492	0.890

ALLELE: HLA-A2				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	RLATVPGGL	478	1.000
ANNs+QM	2	AMAVAAQGL	314	0.930
ANNs+QM	3	ALDDLATGA	453	0.910
ANNs+QM	4	AQHGMELL	99	0.770

ALLELE: HLA-A*0201				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	TLVIRAAEL	32	1.000
ANNS+QM	2	AQHGMELL	99	1.000
ANNS+QM	3	AMAVAAQGL	314	1.000
ANNS+QM	4	ADLESAPVV	387	1.000

ALLELE: HLA-A*0202				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	LATGAVGDL	457	7.380
ANNS+QM	2	TLLPGRPL	520	0.990
ANNS+QM	3	DLESAPVVL	388	0.980
ANNS+QM	4	TLVIRAAEL	32	0.950

ALLELE: HLA-A*0203				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	ALDDLATGA	453	0.980
ANNS+QM	2	DMPDRVWL	771	0.810
ANNS+QM	3	AQHGMELL	99	0.680
ANNS+QM	4	AMAVAAQGL	314	0.570

ALLELE: HLA-A*0206				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	ADLESAPVV	387	0.950
ANNS+QM	2	DMPDRVWL	771	0.730
ANNS+QM	3	AARELAAL	672	0.450
ANNS+QM	4	PVYTIAPFA	423	0.400

ALLELE: HLA-A*0205				
Threshold for 4 % with score: 5.950				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	TARTPVVRL	730	11.950
QM	2	AILTGWRML	706	10.780
QM	3	ADGILAAAA	554	10.450
QM	4	ADETLAALL	562	10.420

ALLELE: HLA-A*1101				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	LRHSTVTER	600	0.890
ANNS+QM	2	FPVAPTQK	613	0.660
ANNS+QM	3	TLLPGGRPL	520	0.590
ANNS+QM	4	RPLADEVAR	526	0.570

ALLELE: HLA-A11				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	QGLAAARGR	320	0.980
ANNS+QM	2	GVPTVEAAR	666	0.960
ANNS+QM	3	RPLADEVAR	526	0.930
ANNS+QM	4	ILAAAADET	557	0.900

ALLELE: HLA-A24				
Threshold for 4 % with score: 7.670				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DFADPDAVL	578	14.020
QM	2	AMAVAAQGL	314	13.600
QM	3	PINISAQVL	150	11.150
QM	4	DLESAPVVL	388	11.040

ALLELE: HLA-A*2402				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	DFADPDAVL	578	1.000
ANNS+QM	2	VGGIEPADF	571	0.900
ANNS+QM	3	RLATVPGGL	478	0.880
ANNS+QM	4	AKRTFAKPI	143	0.730

ALLELE: HLA-A3				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	TVPGGLSAA	481	0.980
ANNS+QM	2	WSHAMAVAA	311	0.970
ANNS+QM	3	RTFEPALRG	633	0.970
ANNS+QM	4	TVPGGEPAA	445	0.960

ALLELE: HLA-A*3101				
Threshold for 4 % with score: -1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GVPTVEAAR	666	0.693
QM	2	RPLADEVAR	526	0.182
QM	3	AQVCAAWHI	535	-1.609

ALLELE: HLA-A31				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	GVPTVEAAR	666	0.960
ANNS+QM	2	RPLADEVAR	526	0.940
ANNS+QM	3	VEAAREELA	670	0.910
ANNS+QM	4	GRDADGILA	551	0.870

ALLELE: HLA-A*0301				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	AILTGWRML	706	0.990
ANNS+QM	2	AKRTFAKPI	143	0.980
ANNS+QM	3	AWHIAELPA	540	0.950
ANNS+QM	4	QGLAAARGR	320	0.940

ALLELE: HLA-A*3302				
Threshold for 4 % with score: -0.105				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GVPTVEAAR	666	2.708
QM	2	QGLAAARGR	320	1.099
QM	3	EISVPKGTLL	25	0.405
QM	4	EVEGQRKPL	66	0.405

ALLELE: HLA-A68.1				
Threshold for 4 % with score: 1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GVPTVEAAR	666	5.704
QM	2	RPLADEVAR	526	2.708
QM	3	EVEGQRKPL	66	2.485
QM	4	AVAAQGLAA	316	2.079

ALLELE: HLA-A20 Cattle				
Threshold for 4 % with score: 3.401				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AKRTFAKPI	143	5.704
QM	2	LRHSTVTER	600	4.382
QM	3	RPLADEVAR	526	3.689
QM	4	GVPTVEAAR	666	3.689

ALLELE: HLA-A2.1				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	TLVIRAAEL	32	1.000
ANNS+QM	2	RLATVPGGL	478	1.000
ANNS+QM	3	TLLPGGRPL	520	1.000
ANNS+QM	4	DMPDRVVWL	771	1.000

ALLELE: HLA-B14				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	TLVIRAAEL	32	1.000
ANNS+QM	2	RRGKVLRRRL	254	1.000
ANNS+QM	3	RRAGERGAL	505	1.000
ANNS+QM	4	AADETLAAL	561	1.000

ALLELE: HLA-B*2702				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RRAGERGAL	505	5.193
QM	2	RRGKVLRRRL	254	3.989
QM	3	ARPHSAEEA	362	2.996
QM	4	GRDADGILA	551	2.996

ALLELE: HLA-B27				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	RRGKVLRRRL	254	1.000
ANNS+QM	2	RRAGERGAL	505	1.000
ANNS+QM	3	LRHSTVTER	600	1.000
ANNS+QM	4	GRDADGILA	551	0.600

ALLELE: HLA-B*2705				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	RRGKVLRRRL	254	1.000
ANNS+QM	2	LRHSTVTER	600	1.000
ANNS+QM	3	GRDADGILA	551	0.980
ANNS+QM	4	PRRAGERGA	504	0.890

ALLELE: HLA-B*3501				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	VPGGEPAAAL	446	1.000
ANNS+QM	2	DPDAVLAAL	581	1.000
ANNS+QM	3	EPALRGSTL	636	1.000
ANNS+QM	4	FPVAPTQK	613	0.990

ALLELE: HLA-B*3701				
Threshold for 4 % with score: 0.405				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	EDESPIVFL	403	5.298
QM	2	ADETLAALL	562	5.298
QM	3	SDHRVLDAL	649	4.094
QM	4	LESAPVLL	389	3.912

ALLELE: HLA-B*3801				
Threshold for 4 % with score: 0.445				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DPDAVLAAL	581	2.054
QM	2	LADDMGVHL	657	2.054
QM	3	EVEGQRKPL	66	1.792
QM	4	AADETLAAL	561	1.792

ALLELE: HLA-B*3901				
Threshold for 4 % with score: 1.792				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AADETLAAL	561	3.296
QM	2	RRGKVLRRRL	254	3.114
QM	3	LADDMGVHL	657	2.890
QM	4	DPDAVLAAL	581	2.603

ALLELE: HLA-B*3902				
Threshold for 4 % with score: 0.693				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AQHGMELL	99	3.178
QM	2	RRGKVLRRRL	254	0.875
QM	3	ATGAVGDLL	458	0.875
QM	4	AVIIVGERL	471	0.875

ALLELE: HLA-B40				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GEPALDDL	449	3.689
QM	2	VEAAREELA	670	3.689
QM	3	LESAPVLL	389	3.401
QM	4	ATVPGGLSA	480	2.079

ALLELE: HLA-B*4403				
Threshold for 4 % with score: 0.405				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AEIGAADGE	744	2.603
QM	2	LESAPVLL	389	2.485
QM	3	AGRHMVSY	378	2.197
QM	4	GEPALDDL	449	2.197

ALLELE: HLA-B*5101				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	RPLADEVAR	526	0.980
ANNS+QM	2	EPALRGSTL	636	0.960
ANNS+QM	3	DPDAVLAAL	581	0.900
ANNS+QM	4	LADDMGVHL	657	0.870

ALLELE: HLA-B*5102				
Threshold for 4 % with score: 9.050				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VGQPEMRTL	11	11.360
QM	2	LADDMGVHL	657	8.870
QM	3	AGRHMAVSY	378	8.730
QM	4	DPDAVLAAL	581	8.380

ALLELE: HLA-B*5103				
Threshold for 4 % with score: 9.280				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VGQPEMRTL	11	11.360
QM	2	LADDMGVHL	657	8.870
QM	3	AGRHMAVSY	378	8.730
QM	4	DPDAVLAAL	581	8.380

ALLELE: HLA-B*5201				
Threshold for 4 % with score: 1.974				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	ADLESAPVV	387	3.178
QM	2	AQVCAAWHI	535	2.708
QM	3	AGQSDHRVL	646	2.303
QM	4	LDDLATGAV	454	1.782

ALLELE: HLA-B*5301				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	DPDAVLAAL	581	1.000
ANNS+QM	2	EPALRGSTL	636	1.000
ANNS+QM	3	LADDMGVHL	657	1.000
ANNS+QM	4	FPVAPTQK	613	0.970

ALLELE: HLA-B*5401				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	LPAAAGRDA	546	0.990
ANNS+QM	2	DPDAVLAAL	581	0.980
ANNS+QM	3	FPVAPTQK	613	0.970
ANNS+QM	4	EPADFADPD	575	0.940

ALLELE: HLA-B*51				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	LADDMGVHL	657	1.000
ANNS+QM	2	EPALRGSTL	636	0.990
ANNS+QM	3	DPDAVLAAL	581	0.980
ANNS+QM	4	EPADFADPD	575	0.950

ALLELE: HLA-B*5801				
Threshold for 4 % with score: -0.223				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	KTVPGGEPA	444	2.485
QM	2	ATVPGGLSA	480	1.482
QM	3	HSAEEADFL	365	1.386
QM	4	MSGRLIKTV	438	1.376

ALLELE: HLA-B60				
Threshold for 4 % with score: 1.386				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	LESAPVVLL	389	6.461
QM	2	GEPAAALDDL	449	5.075
QM	3	EDESPIVFL	403	3.689
QM	4	ADETLAALL	562	3.091

ALLELE: HLA-B61				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VEAAREELA	670	3.689
QM	2	RDADGILAA	552	2.398
QM	3	ADLESAPVV	387	2.303
QM	4	GEPAAALDDL	449	2.175

ALLELE: HLA-B62				
Threshold for 4 % with score: 0.693				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AQHGVMELL	99	2.262
QM	2	AGRHMAVSY	378	1.974
QM	3	TLLPGGRPL	520	1.569
QM	4	RLATVPGGL	478	1.386

ALLELE: HLA-B7				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	VPGGEPAAAL	446	1.000
ANNS+QM	2	DPDAVLAAL	581	1.000
ANNS+QM	3	EPALRGSTL	636	1.000
ANNS+QM	4	AKRTFAKPI	143	0.970

ALLELE: HLA-B*0702				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	VPGGEPAAAL	446	1.000
ANNS+QM	2	DPDAVLAAL	581	1.000
ANNS+QM	3	EPALRGSTL	636	1.000
ANNS+QM	4	LPAAAGRDA	546	0.990

ALLELE: HLA-B8				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	LADTTGARL	492	0.700
ANNS+QM	2	VEAAREELA	670	0.700
ANNS+QM	3	AAAADETLA	559	0.660
ANNS+QM	4	DAYAYAKFA	341	0.650

ALLELE: HLA-Cw*0301				
Threshold for 4 % with score: 2.015				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	TLLPGRPL	520	4.605
QM	2	VGQPEMRTL	11	3.178
QM	3	TLVIRAAEL	32	2.996
QM	4	AVIIVGERL	471	2.996

ALLELE: HLA-Cw*0401				
Threshold for 4 % with score: 4.370				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VPGGEPAAAL	446	8.760
QM	2	DPDAVLAAL	581	8.230
QM	3	LPAAAGRDA	546	6.640
QM	4	LADDMGVHL	657	6.450

ALLELE: HLA-Cw*0602				
Threshold for 4 % with score: 1.482				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DATGFVVSL	590	2.580
QM	2	MSGRLIKTV	438	1.887
QM	3	EAGALPTLL	514	1.887
QM	4	LADDMGVHL	657	1.887

ALLELE: HLA-Cw*0702				
Threshold for 4 % with score: 1.212				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RRGKVLRRRL	254	2.262
QM	2	DPDAVLAAL	581	2.156
QM	3	AGRHMAVSY	378	2.079
QM	4	SDHRVLDAL	649	1.751

ALLELE: H2-Db				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	AQHGVME LL	99	1.000
ANNS+QM	2	AILTGWRML	706	0.990
ANNS+QM	3	YAKFARITL	345	0.950
ANNS+QM	4	HSAEEADFL	365	0.950

ALLELE: H2-Dd				
Threshold for 4 % with score: 11.800				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GGLSAAARL	484	21.460
QM	2	VGQPEMVTL	11	20.510
QM	3	DMPDRVVWL	771	19.420
QM	4	RLQDGEPYL	719	16.580

ALLELE: H2-Kb				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	AQHGVMEELL	99	1.000
ANNS+QM	2	AILTGWRML	706	0.990
ANNS+QM	3	TLLPGRPL	520	0.980
ANNS+QM	4	AADETLAAL	561	0.980

ALLELE: H2-Kd				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	RLATVPGGL	478	1.000
ANNS+QM	2	VPGGEPAL	446	0.970
ANNS+QM	3	EISVPKGTLL	25	0.950
ANNS+QM	4	EAGALPTLL	514	0.950

ALLELE: H2-Kk				
Threshold for 4 % with score: 1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	REELAALGI	674	5.521
QM	2	VEAAREELA	670	3.401
QM	3	LESAPVLL	389	2.996
QM	4	GEPALDDL	449	2.996

ALLELE: H2-Ld				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	WSHAMAVAA	311	1.000
ANNS+QM	2	EPALRGSTL	636	1.000
ANNS+QM	3	LPAAAGRDA	546	0.950
ANNS+QM	4	LESAPVLL	389	0.840

ALLELE: HLA-G				
Threshold for 4 % with score: 9.260				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	ELPAAAGRDR	545	18.130
QM	2	DMPDRVVWL	771	16.710
QM	3	GEPAAALDDL	449	15.510
QM	4	RLATVPGGL	478	13.710

ALLELE: H-2Qa				
Threshold for 4 % with score: 6.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	TLLPGGRPL	520	12.870
QM	2	RLATVPGGL	478	12.220
QM	3	SDHRVLDAL	649	9.420
QM	4	DMPDRVVWL	771	8.140

ALLELE: HLA-B*2706				
Threshold for 4 % with score: 5.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RMLLDDEGRL	712	7.470
QM	2	IRDGGDPKG	296	7.200
QM	3	KHAAGPHIA	686	7.000
QM	4	RRGKVLRRRL	254	6.560

ALLELE: HLA-B35				
Threshold for 4 % with score: 8.350				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	EPALRGSTL	636	16.790
QM	2	DPDAVLAAL	581	15.350
QM	3	AVIIVGERL	471	11.100
QM	4	TDHRRGKVL	251	10.030

ALLELE: Mamu-A*01				
Threshold for 4 % with score: 3.650				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AVIIVGERL	471	5.110
QM	2	TARTPVVRL	730	4.780
QM	3	TVPGGEPAA	445	3.000
QM	4	DATGFVVSL	590	2.820

ALLELE: HLA-A*0204				
Threshold for 4 % with score: 12.070				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DLESAPVVL	388	19.690
QM	2	RLATVPGGL	478	17.800
QM	3	ILAAAADET	557	17.740
QM	4	AADETLAAL	561	17.600

ALLELE: HLA-B*2703				
Threshold for 4 % with score: 5.130				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RRGKVLRRRL	254	11.940
QM	2	ARPHSAEEA	362	10.310
QM	3	GRDADGILA	551	10.080
QM	4	RRAGERGAL	505	9.050

ALLELE: HLA-B*2704				
Threshold for 4 % with score: 8.790				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RRGKVLRRRL	254	17.730
QM	2	RRAGERGAL	505	16.320
QM	3	GEPALDDL	449	14.810
QM	4	VPGGEPAAAL	446	14.690

ALLELE: HLA-B*2902				
Threshold for 4 % with score: 7.750				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GERGALEAG	508	17.510
QM	2	AEIGAADGE	744	11.980
QM	3	GEPAAALDDL	449	10.940
QM	4	LESAPVVLL	389	9.130

ALLELE: HLA-A*3301				
Threshold for 4 % with score: 3.840				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	FPVAPTQK	613	3.750
QM	2	AILTGWRML	706	2.850
QM	3	AGSTVHRQL	784	2.300
QM	4	GVPTVEAAR	666	2.110

ALLELE: HLA-B44				
Threshold for 4 % with score: 4.900				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AEIGAADGE	744	12.880
QM	2	GERGALEAG	508	11.050
QM	3	REELAALGI	674	8.830
QM	4	GEPAAALDDL	449	7.300

ALLELE: HLA-A*6801				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	QGLAAARGR	320	0.960
ANNS+QM	2	GVPTVEAAR	666	0.930
ANNS+QM	3	FPVAPTQK	613	0.920
ANNS+QM	4	LRHSTVTER	600	0.910

ALLELE: HLA-A*6802				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNS+QM	1	TARTPVVRL	730	0.990
ANNS+QM	2	DLATGAVGD	456	0.980
ANNS+QM	3	AVIIVGERL	471	0.980
ANNS+QM	4	RLATVPGGL	478	0.980