



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

[Home](#) [ComPred](#) [ANNPred](#) [References](#) [Help](#) [Matrices](#) [Team](#) [Contact](#)

Antigen Name	Untitled
Scanned on	Thu Mar 4 20:20:48 2010
Length of input sequence	578 amino acids
Number of nonamers from input sequence	570
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	LADQAEAVV	489	0.910
ANNs+QM	2	IEDPKPLRL	125	0.900
ANNs+QM	3	LADAGPALL	318	0.770
ANNs+QM	4	GLDLEATLR	61	0.620

ALLELE: HLA-A2				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	LLIEDPKPL	123	1.000

ANNs+QM	2	RLSDVVDDL	424	1.000
ANNs+QM	3	GLRTSVQFV	471	1.000
ANNs+QM	4	AIVHSATSL	70	0.990

ALLELE: HLA-A*0201				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	AIVHSATSL	70	1.000
ANNs+QM	2	HLPKGLGVI	113	1.000
ANNs+QM	3	LLIEDPKPL	123	1.000
ANNs+QM	4	KLTAADAAL	245	1.000

ALLELE: HLA-A*0202				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	LLIEDPKPL	123	1.000
ANNs+QM	2	KLTAADAAL	245	1.000
ANNs+QM	3	AIVHSATSL	70	0.970
ANNs+QM	4	ALKLTAADA	243	0.970

ALLELE: HLA-A*0203				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	HLPKGLGVI	113	0.990
ANNs+QM	2	LTAADAALV	246	0.990
ANNs+QM	3	ATRDIATEL	218	0.970
ANNs+QM	4	ADAGPALLL	319	0.940

ALLELE: HLA-A*0206				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	GLRTSVQFV	471	1.000
ANNs+QM	2	QIVEGRDRL	40	0.990
ANNs+QM	3	YHPPMRTFL	148	0.990
ANNs+QM	4	LAAAAGIAV	192	0.910

ALLELE: HLA-A*0205				
Threshold for 4 % with score: 5.950				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	ELADAGPAL	317	12.080
QM	2	DQAALAWQL	363	11.910
QM	3	YHPPMRTFL	148	11.060
QM	4	AGPALLLPL	321	10.780

ALLELE: HLA-A*1101				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	GLDLEATLR	61	0.860
ANNs+QM	2	YHPPMRTFL	148	0.640
ANNs+QM	3	LADQAEAVV	489	0.520
ANNs+QM	4	HTLSQLRLH	20	0.510

ALLELE: HLA-A11				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	ADQAEAVVR	490	1.000

ANNs+QM	2	SAVASIVGR	278	0.980
ANNs+QM	3	IPVAGAVLR	288	0.970
ANNs+QM	4	LVEAMLVVT	51	0.890

ALLELE: HLA-A24				
Threshold for 4 % with score: 7.670				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	EQLEMAAF	353	11.360
QM	2	AIVHSATSL	70	10.620
QM	3	TIPVAGAVL	287	9.480
QM	4	ADAGPALL	319	8.550

ALLELE: HLA-A*2402				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PFSDDDEVL	180	1.000
ANNs+QM	2	SWIEATRDI	214	0.950
ANNs+QM	3	YHPPMRTFL	148	0.880
ANNs+QM	4	RIGHLPKGL	110	0.870

ALLELE: HLA-A3				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	TVFRLVAAE	234	0.990
ANNs+QM	2	LVQALAAAA	188	0.980
ANNs+QM	3	VLVQALAAA	187	0.890
ANNs+QM	4	IPVAGAVLR	288	0.840

ALLELE: HLA-A*3101				
Threshold for 4 % with score: -1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GLDLEATLR	61	0.693
QM	2	SAVASIVGR	278	-0.223
QM	3	IPVAGAVLR	288	-0.916

ALLELE: HLA-A31				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	GPALLPLR	322	0.990
ANNs+QM	2	VAAEALKLT	239	0.970
ANNs+QM	3	GLDLEATLR	61	0.960
ANNs+QM	4	SAVASIVGR	278	0.960

ALLELE: HLA-A*0301				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	ALKLTAADA	243	0.930
ANNs+QM	2	HTLSQLRLH	20	0.900
ANNs+QM	3	ATRDIATEL	218	0.880
ANNs+QM	4	ADQAEAVVR	490	0.830

ALLELE: HLA-A*3302				
Threshold for 4 % with score: -0.105				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GLDLEATLR	61	2.197
QM	2	SAVASIVGR	278	1.099

QM	3	IPVAGAVLR	288	1.099
QM	4	GPALLPLR	322	1.099

ALLELE: HLA-A68.1				
Threshold for 4 % with score: 1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	EVLVQALAA	186	3.178
QM	2	EVTDNGRGL	526	2.485
QM	3	SAVASIVGR	278	2.303
QM	4	IPVAGAVLR	288	2.303

ALLELE: HLA-A20 Cattle				
Threshold for 4 % with score: 3.401				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	GLDLEATLR	61	4.787
QM	2	LKLTAADAA	244	4.605
QM	3	PKGLGVIGL	115	3.912
QM	4	SAVASIVGR	278	3.689

ALLELE: HLA-A2.1				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	HLPKGLGVI	113	1.000
ANNs+QM	2	LLIEDPKPL	123	1.000
ANNs+QM	3	KLTAADAAL	245	1.000
ANNs+QM	4	GLDELADAG	314	1.000

ALLELE: HLA-B14				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	DRLDGLVEA	46	1.000
ANNs+QM	2	FRLVAAEAL	236	1.000
ANNs+QM	3	VDLEGLDEL	310	1.000
ANNs+QM	4	DRDRIARDL	386	1.000

ALLELE: HLA-B*2702				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RRMRELDVL	376	5.193
QM	2	TRDIATELL	219	4.094
QM	3	FRLVAAEAL	236	4.094
QM	4	VRHAKASTL	505	4.094

ALLELE: HLA-B27				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	DRLDGLVEA	46	1.000
ANNs+QM	2	FRLVAAEAL	236	1.000
ANNs+QM	3	PRRVDRVDL	304	1.000
ANNs+QM	4	RRMRELDVL	376	1.000

ALLELE: HLA-B*2705				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	FRLVAAEAL	236	1.000

ANNs+QM	2	RRMRELDVL	376	1.000
ANNs+QM	3	VRHAKASTL	505	1.000
ANNs+QM	4	TRDIATELL	219	0.990

ALLELE: HLA-B*3501				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	VPGASGTVL	562	1.000
ANNs+QM	2	IPVAGAVLR	288	0.990
ANNs+QM	3	GPALLPLR	322	0.990
ANNs+QM	4	VRHAKASTL	505	0.930

ALLELE: HLA-B*3701				
Threshold for 4 % with score: 0.405				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	LDGLVEAML	48	5.704
QM	2	ADAGPALL	319	5.298
QM	3	HDHVIQRLF	395	4.094
QM	4	DDEVLVQAL	184	3.689

ALLELE: HLA-B*3801				
Threshold for 4 % with score: 0.445				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	YHPPMRTFL	148	3.664
QM	2	RHTLSQLRL	19	3.401
QM	3	RIDAAVAQF	459	1.361
QM	4	LADAGPALL	318	1.099

ALLELE: HLA-B*3901				
Threshold for 4 % with score: 1.792				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RHTLSQLRL	19	4.500
QM	2	YHPPMRTFL	148	3.807
QM	3	TRDIATELL	219	3.807
QM	4	RRMRELDVL	376	3.807

ALLELE: HLA-B*3902				
Threshold for 4 % with score: 0.693				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DQAALAWQL	363	3.178
QM	2	EQAGGEFTL	551	2.996
QM	3	IQRLFAIGL	399	1.974
QM	4	EQLEMMAAF	353	1.792

ALLELE: HLA-B*40				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DEVLVQALA	185	4.382
QM	2	VEAMLVVTA	52	3.689
QM	3	DELADAGPA	316	3.689
QM	4	IEDPKPLRL	125	2.996

ALLELE: HLA-B*4403				
Threshold for 4 % with score: 0.405				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DEVLVQALA	185	3.584

QM	2	DELADAGPA	316	3.584
QM	3	VEAMLVVTA	52	3.178
QM	4	TEPATVFRL	230	2.890

ALLELE: HLA-B*5101				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	EPATVFRLV	231	1.000
ANNs+QM	2	VASIVGRTI	280	1.000
ANNs+QM	3	GPALLPLR	322	0.910
ANNs+QM	4	VRHAKASTL	505	0.890

ALLELE: HLA-B*5102				
Threshold for 4 % with score: 9.050				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VASIVGRTI	280	19.770
QM	2	EPATVFRLV	231	15.540
QM	3	TFLGVPVRV	154	10.680
QM	4	IPVAGAVLR	288	10.480

ALLELE: HLA-B*5103				
Threshold for 4 % with score: 9.280				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VASIVGRTI	280	19.770
QM	2	EPATVFRLV	231	15.540
QM	3	TFLGVPVRV	154	10.680
QM	4	IPVAGAVLR	288	10.480

ALLELE: HLA-B*5201				
Threshold for 4 % with score: 1.974				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VQQLSDVV	421	5.799
QM	2	RGTVAGVVV	332	4.500
QM	3	LADQAEAVV	489	3.807
QM	4	HLPKGLGVI	113	3.679

ALLELE: HLA-B*5301				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	RNPEVQQRL	417	1.000
ANNs+QM	2	IPVAGAVLR	288	0.960
ANNs+QM	3	VPVDEDMPA	256	0.950
ANNs+QM	4	GPALLPLR	322	0.950

ALLELE: HLA-B*5401				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IPVAGAVLR	288	1.000
ANNs+QM	2	GPALLPLR	322	0.970
ANNs+QM	3	VPGASGTVL	562	0.970
ANNs+QM	4	EPATVFRLV	231	0.910

ALLELE: HLA-B*51				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	VRHAKASTL	505	0.980

ANNs+QM	2	VPGASGTVL	562	0.980
ANNs+QM	3	IEDPKPLRL	125	0.970
ANNs+QM	4	VPVDEDMPA	256	0.930

ALLELE: HLA-B*5801				
Threshold for 4 % with score: -0.223				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	SGTEPATVF	228	1.386
QM	2	ATRDIA TEL	218	1.099
QM	3	VAAEALKLT	239	0.875
QM	4	FSDDDEV LV	181	0.788

ALLELE: HLA-B60				
Threshold for 4 % with score: 1.386				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	IEDPKPLRL	125	5.864
QM	2	TEPATVFRL	230	5.170
QM	3	ADAGPALLL	319	4.382
QM	4	VDLEGLDEL	310	3.689

ALLELE: HLA-B61				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VEAMLVVTA	52	3.689
QM	2	DEV LVQALA	185	3.689
QM	3	DELADAGPA	316	3.689
QM	4	IEDPKPLRL	125	2.079

ALLELE: HLA-B62				
Threshold for 4 % with score: 0.693				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	EQLEMMAAF	353	4.477
QM	2	IQRLFAIGL	399	3.623
QM	3	RQRIDAAVA	457	2.580
QM	4	VQQLSDVV	421	2.175

ALLELE: HLA-B7				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	ATRDIA TEL	218	1.000
ANNs+QM	2	EPATVFRLV	231	1.000
ANNs+QM	3	TIPVAGAVL	287	1.000
ANNs+QM	4	IQRLFAIGL	399	1.000

ALLELE: HLA-B*0702				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	EPATVFRLV	231	1.000
ANNs+QM	2	VP GASGTVL	562	1.000
ANNs+QM	3	IPVAGAVLR	288	0.990
ANNs+QM	4	GPALLPLR	322	0.980

ALLELE: HLA-B8				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	TRDIATELL	219	0.740

ANNs+QM	2	IEDPKPLRL	125	0.730
ANNs+QM	3	VAAEALKLT	239	0.720
ANNs+QM	4	GLDLEATLR	61	0.710

ALLELE: HLA-Cw*0301				
Threshold for 4 % with score: 2.015				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RRMRELDVL	376	4.094
QM	2	FRLVAAEAL	236	3.689
QM	3	LLIEDPKPL	123	3.584
QM	4	VDLEGLDEL	310	3.401

ALLELE: HLA-Cw*0401				
Threshold for 4 % with score: 4.370				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	ELADAGPAL	317	10.160
QM	2	RLSDVVDDL	424	7.370
QM	3	VPGASGTVL	562	7.370
QM	4	TEPATVFRL	230	6.370

ALLELE: HLA-Cw*0602				
Threshold for 4 % with score: 1.482				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DDEVLVQAL	184	2.580
QM	2	AGPALLLPL	321	2.485
QM	3	DRDRIARDL	386	1.982
QM	4	IQRLFAIGL	399	1.982

ALLELE: HLA-Cw*0702				
Threshold for 4 % with score: 1.212				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DDEVLVQAL	184	1.751
QM	2	LDGLVEAML	48	1.569
QM	3	AGPALLPL	321	1.569
QM	4	TVAGVVVVL	334	1.569

ALLELE: H2-Db				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	EAVSNAVRH	499	0.960
ANNs+QM	2	EQAGGEFTL	551	0.960
ANNs+QM	3	QIVEGRDRL	40	0.920
ANNs+QM	4	ELADAGPAL	317	0.900

ALLELE: H2-Dd				
Threshold for 4 % with score: 11.800				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AGPALLPL	321	22.420
QM	2	RNPEVQQRL	417	20.310
QM	3	AGLDLEATL	60	19.050
QM	4	YHPPMRTFL	148	18.750

ALLELE: H2-Kb				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	TRDIATELL	219	1.000

ANNs+QM	2	FRLVAAEAL	236	0.990
ANNs+QM	3	AGLDLEATL	60	0.980
ANNs+QM	4	TIPVAGAVL	287	0.970

ALLELE: H2-Kd				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	TFLGVPVRV	154	1.000
ANNs+QM	2	RIGHLPKGL	110	0.980
ANNs+QM	3	YHPPMRTFL	148	0.970
ANNs+QM	4	FRLVAAEAL	236	0.970

ALLELE: H2-Kk				
Threshold for 4 % with score: 1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DEVLVQALA	185	3.689
QM	2	VEAMLVVTA	52	3.401
QM	3	IEDPKPLRL	125	2.996
QM	4	TEPATVFRL	230	2.996

ALLELE: H2-Ld				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	YHPPMRTFL	148	1.000
ANNs+QM	2	VPGASGTVL	562	1.000
ANNs+QM	3	VRHAKASTL	505	0.930
ANNs+QM	4	DQAALAWQL	363	0.920

ALLELE: HLA-G

Threshold for 4 % with score: 9.260

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	TEPATVFRL	230	17.510
QM	2	TIPVAGAVL	287	16.840
QM	3	RNPEVQQL	417	14.370
QM	4	VRHAKASTL	505	14.110

ALLELE: H-2Qa

Threshold for 4 % with score: 6.000

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	DRDRIARDL	386	11.970
QM	2	PLSVVDSAL	481	11.510
QM	3	RLSDVVDDL	424	10.180
QM	4	FRLVAAEAL	236	9.380

ALLELE: HLA-B*2706

Threshold for 4 % with score: 5.000

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RIGHLPKGL	110	10.000
QM	2	RRMRELDVL	376	8.030
QM	3	EVTDNQRGL	526	5.200
QM	4	SAVASIVGR	278	4.890

ALLELE: HLA-B35

Threshold for 4 % with score: 8.350

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VRHAKASTL	505	10.030

QM	2	AAFADQAAL	359	9.830
QM	3	VPGASGTVL	562	9.290
QM	4	AIVHSATSL	70	9.020

ALLELE: Mamu-A*01				
Threshold for 4 % with score: 3.650				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	TRDIATELL	219	5.150
QM	2	RNPEVQQRL	417	4.630
QM	3	SWIEATRDI	214	4.100
QM	4	AAFADQAAL	359	2.540

ALLELE: HLA-A*0204				
Threshold for 4 % with score: 12.070				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RLSDVVDDL	424	22.690
QM	2	KLTAADAAL	245	18.390
QM	3	RLFAIGLAL	401	17.870
QM	4	GLDELADAG	314	17.730

ALLELE: HLA-B*2703				
Threshold for 4 % with score: 5.130				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VRHAKASTL	505	7.530
QM	2	TRDIATELL	219	6.830
QM	3	DRLDGLVEA	46	6.230
QM	4	RRMRELDVL	376	5.940

ALLELE: HLA-B*2704

Threshold for 4 % with score: 8.790

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VRHAKASTL	505	16.660
QM	2	RIGHLPKGL	110	14.560
QM	3	PRRVDRVDL	304	13.770
QM	4	AAFADQAAL	359	12.010

ALLELE: HLA-B*2902

Threshold for 4 % with score: 7.750

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	LEGLDELAD	312	12.300
QM	2	TEPATVFRL	230	12.080
QM	3	PFSDDDEVL	180	11.600
QM	4	PKGLGVIGL	115	9.650

ALLELE: HLA-A*3301

Threshold for 4 % with score: 3.840

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	FVGPLSVVD	478	2.450
QM	2	SAVASIVGR	278	1.830
QM	3	DQAALAWQL	363	1.630
QM	4	LADAGPALL	318	1.230

ALLELE: HLA-B44

Threshold for 4 % with score: 4.900

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	ALKLTAADA	243	6.870

QM	2	DEVLVQALA	185	5.780
QM	3	TEPATVFRL	230	5.130
QM	4	SAVASIVGR	278	4.690

ALLELE: HLA-A*6801				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	SAVASIVGR	278	0.970
ANNs+QM	2	VAAEALKLT	239	0.920
ANNs+QM	3	ELADAGPAL	317	0.910
ANNs+QM	4	GLDLEATLR	61	0.890

ALLELE: HLA-A*6802				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	GLRTSVQFV	471	1.000
ANNs+QM	2	LADQAEAVV	489	0.990
ANNs+QM	3	SWIEATRDI	214	0.980
ANNs+QM	4	LTAADAALV	246	0.980