



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	Wed Feb 17 20:34:05 2010
Length of input sequence	265 amino acids
Number of nonamers from input sequence	257
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	VSDPGGPVT	39	0.950
ANNs+QM	2	APVTEAWA	9	0.440
ANNs+QM	3	VKAPTNGVI	58	0.230
ANNs+QM	4	DSDWEPVKE	98	0.200

ALLELE: HLA-A2				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PIREHLNRL	190	1.000
ANNs+QM	2	RASKPLVRL	70	0.940

ANNs+QM	3	VISQALSEL	152	0.400
ANNs+QM	4	AHLRASKPL	67	0.190

ALLELE: HLA-A*0201				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	VISQALSEL	152	1.000
ANNs+QM	2	SQALSELRL	154	0.990
ANNs+QM	3	TAAVSTGRL	47	0.270
ANNs+QM	4	PIREHLNRL	190	0.250

ALLELE: HLA-A*0202				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PTNGVIAHL	61	0.790
ANNs+QM	2	AHLRASKPL	67	0.710
ANNs+QM	3	VSDPGGPVT	39	0.370
ANNs+QM	4	VISQALSEL	152	0.340

ALLELE: HLA-A*0203				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	SDPGGPVTA	40	0.940
ANNs+QM	2	RASKPLVRL	70	0.740
ANNs+QM	3	SQALSELRL	154	0.740
ANNs+QM	4	VISQALSEL	152	0.730

ALLELE: HLA-A*0206				
Threshold for .5 % with score: .5				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	VISQALSEL	152	0.740
ANNs+QM	2	DVISQALSE	151	0.430
ANNs+QM	3	PAIDGAFVL	207	0.190
ANNs+QM	4	EAAWAEIEL	13	0.180

ALLELE: HLA-A*0205				
Threshold for 4 % with score: 5.950				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RASKPLVRL	70	9.890
QM	2	AHLRASKPL	67	7.630
QM	3	PAIDGAFVL	207	7.590
QM	4	PTNGVIAHL	61	6.730

ALLELE: HLA-A*1101				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	AHLRASKPL	67	0.600
ANNs+QM	2	VISQALSEL	152	0.550
ANNs+QM	3	FDLQLGTDV	222	0.550
ANNs+QM	4	YSAASIEGI	123	0.390

ALLELE: HLA-A11				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	AAWAEIELE	14	0.870

ANNs+QM	2	YSAASIEGI	123	0.840
ANNs+QM	3	PVTEAAWAE	10	0.790
ANNs+QM	4	ETLTFLCYT	248	0.720

ALLELE: HLA-A24				
Threshold for 4 % with score: 7.670				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	PIREHLNRL	190	8.360
QM	2	PVKEAAKKL	103	8.070
QM	3	VKAPTNGVI	58	7.520
QM	4	VISQALSEL	152	6.930

ALLELE: HLA-A*2402				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	RASKPLVRL	70	0.620
ANNs+QM	2	YSAASIEGI	123	0.470
ANNs+QM	3	RGGDFDLQL	218	0.250
ANNs+QM	4	SQALSELRL	154	0.230

ALLELE: HLA-A3				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PVTEAAWAE	10	0.830
ANNs+QM	2	KAPTNGVIA	59	0.260
ANNs+QM	3	PVKEAAKKL	103	0.230
ANNs+QM	4	FVLTRGGD	213	0.220

ALLELE: HLA-A*3101				
Threshold for 4 % with score: -1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VISQALSEL	152	-3.219
QM	2	SQALSELRL	154	-3.219
QM	3	RASKPLVRL	70	-4.423

ALLELE: HLA-A31				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	VSDPGGPVT	39	0.870
ANNs+QM	2	YSAASIEGI	123	0.470
ANNs+QM	3	SQALSELRL	154	0.450
ANNs+QM	4	RASKPLVRL	70	0.430

ALLELE: HLA-A*0301				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	AHLRASKPL	67	0.980
ANNs+QM	2	VISQALSEL	152	0.890
ANNs+QM	3	VKAPTNGVI	58	0.820
ANNs+QM	4	AKKLAFVED	108	0.800

ALLELE: HLA-A*3302				
Threshold for 4 % with score: -0.105				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VSDPGGPVT	39	-0.693
QM	2	YSAASIEGI	123	-0.693

QM	3	VISQALSEL	152	-0.693
-----------	---	-----------	-----	--------

ALLELE: HLA-A68.1				
Threshold for 4 % with score: 1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	ETLTFLCYT	248	1.792
QM	2	DVISQALSE	151	0.875
QM	3	EAAWAEIEL	13	-0.105

ALLELE: HLA-A20 Cattle				
Threshold for 4 % with score: 3.401				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VKAPTNGVI	58	5.704
QM	2	AKKLAFVED	108	2.303
QM	3	SQALSELRL	154	2.303
QM	4	EAAWAEIEL	13	1.609

ALLELE: HLA-A2.1				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PIREHLNRL	190	0.960
ANNs+QM	2	YSAASIEGI	123	0.950
ANNs+QM	3	PAIDGAFVL	207	0.950
ANNs+QM	4	AHLRASKPL	67	0.890

ALLELE: HLA-B14				
Threshold for 4 % with score: 4				

Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PIREHLNRL	190	1.000
ANNs+QM	2	RASKPLVRL	70	0.940
ANNs+QM	3	SQALSELRL	154	0.930
ANNs+QM	4	YRDLAPVTE	5	0.910

ALLELE: HLA-B*2702				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	SQALSELRL	154	1.792
QM	2	YRDLAPVTE	5	0.693
QM	3	RASKPLVRL	70	-0.105

ALLELE: HLA-B27				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	YRDLAPVTE	5	0.920
ANNs+QM	2	FDLQLGTDV	222	0.130
ANNs+QM	3	RDLAPVTEA	6	0.100
ANNs+QM	4	ETLTFLCYT	248	0.100

ALLELE: HLA-B*2705				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	YRDLAPVTE	5	0.980
ANNs+QM	2	SQALSELRL	154	0.570
ANNs+QM	3	RASKPLVRL	70	0.440
ANNs+QM	4	VISQALSEL	152	0.210

ALLELE: HLA-B*3501				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IPDVISQAL	149	1.000
ANNs+QM	2	GPVTAAVST	44	0.980
ANNs+QM	3	YRDLAPVTE	5	0.890
ANNs+QM	4	APVTEAWA	9	0.860

ALLELE: HLA-B*3701				
Threshold for 4 % with score: 0.405				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	FDLQLGTDV	222	2.079
QM	2	RDLAPVTEA	6	1.386
QM	3	SDPGGPVTA	40	1.386
QM	4	SDWEPVKEA	99	1.386

ALLELE: HLA-B*3801				
Threshold for 4 % with score: 0.445				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AHLRASKPL	67	3.664
QM	2	IPDVISQAL	149	2.054
QM	3	RGGDFDLQL	218	0.693
QM	4	EAAWAEIEL	13	0.262

ALLELE: HLA-B*3901				
Threshold for 4 % with score: 1.792				
Prediction method	Rank	Sequence	Residue No.	Peptide Score

QM	1	AHLRASKPL	67	5.193
QM	2	IPDVISQAL	149	2.197
QM	3	RASKPLVRL	70	1.504
QM	4	VISQALSEL	152	1.504

ALLELE: HLA-B*3902				
Threshold for 4 % with score: 0.693				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	SQALSELRL	154	2.996
QM	2	IPDVISQAL	149	0.875
QM	3	HGYPIREHL	187	0.875
QM	4	RGGDFDLQL	218	0.875

ALLELE: HLA-B*40				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RDLAPVTEA	6	2.015
QM	2	SDWEPVKEA	99	2.015
QM	3	APVTEAAWA	9	1.386
QM	4	SDPGGPVTA	40	0.916

ALLELE: HLA-B*4403				
Threshold for 4 % with score: 0.405				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RDLAPVTEA	6	1.504
QM	2	SDWEPVKEA	99	1.504
QM	3	SDPGGPVTA	40	0.405
QM	4	FDLQLGTDV	222	0.405

ALLELE: HLA-B*5101				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	YRDLAPVTE	5	0.940
ANNs+QM	2	RASKPLVRL	70	0.920
ANNs+QM	3	IPDVISQAL	149	0.860
ANNs+QM	4	GPVTAAVST	44	0.850

ALLELE: HLA-B*5102				
Threshold for 4 % with score: 9.050				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RASKPLVRL	70	9.950
QM	2	IPDVISQAL	149	9.740
QM	3	GPVTAAVST	44	9.470
QM	4	FDLQLGTDV	222	7.630

ALLELE: HLA-B*5103				
Threshold for 4 % with score: 9.280				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RASKPLVRL	70	9.950
QM	2	IPDVISQAL	149	9.740
QM	3	GPVTAAVST	44	9.470
QM	4	FDLQLGTDV	222	7.630

ALLELE: HLA-B*5201				
Threshold for 4 % with score: 1.974				
Prediction method	Rank	Sequence	Residue No.	Peptide Score

QM	1	HGYPIREHL	187	2.580
QM	2	IPDVISQAL	149	2.165
QM	3	VKAPTNGVI	58	1.782
QM	4	VSDPGGPVT	39	1.686

ALLELE: HLA-B*5301				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IPDVISQAL	149	1.000
ANNs+QM	2	APVTEAAWA	9	0.960
ANNs+QM	3	PAIDGAFVL	207	0.870
ANNs+QM	4	VKAPTNGVI	58	0.770

ALLELE: HLA-B*5401				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	GPVTAAVST	44	1.000
ANNs+QM	2	IPDVISQAL	149	1.000
ANNs+QM	3	APVTEAAWA	9	0.910
ANNs+QM	4	PAIDGAFVL	207	0.670

ALLELE: HLA-B*51				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IPDVISQAL	149	0.990
ANNs+QM	2	PAIDGAFVL	207	0.880
ANNs+QM	3	RASKPLVRL	70	0.770
ANNs+QM	4	APVTEAAWA	9	0.620

ALLELE: HLA-B*5801				
Threshold for 4 % with score: -0.223				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RASKPLVRL	70	2.069
QM	2	VSDPGGPVT	39	1.482
QM	3	KAPTNGVIA	59	1.099
QM	4	YSAASIEGI	123	0.875

ALLELE: HLA-B60				
Threshold for 4 % with score: 1.386				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RASKPLVRL	70	2.868
QM	2	EAAWAEIEL	13	2.773
QM	3	TAAVSTGRL	47	2.175
QM	4	SQALSELRL	154	2.175

ALLELE: HLA-B61				
Threshold for 4 % with score: 0.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	FDLQLGTDV	222	2.303
QM	2	RDLAPVTEA	6	1.705
QM	3	SDWEPVKEA	99	1.609
QM	4	SDPGGPVTA	40	0.916

ALLELE: HLA-B62				
Threshold for 4 % with score: 0.693				
Prediction method	Rank	Sequence	Residue No.	Peptide Score

QM	1	SQALSELRL	154	0.875
QM	2	VISQALSEL	152	-0.693
QM	3	RGGDFDLQL	218	-1.332

ALLELE: HLA-B7				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IPDVISQAL	149	1.000
ANNs+QM	2	PIREHLNRL	190	0.940
ANNs+QM	3	APVTEAWA	9	0.810
ANNs+QM	4	PAIDGAFVL	207	0.790

ALLELE: HLA-B*0702				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IPDVISQAL	149	1.000
ANNs+QM	2	APVTEAWA	9	0.930
ANNs+QM	3	GPVTA AVST	44	0.670
ANNs+QM	4	TAAVSTGRL	47	0.620

ALLELE: HLA-B8				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	VSDPGGPVT	39	0.710
ANNs+QM	2	SQALSELRL	154	0.700
ANNs+QM	3	PAIDGAFVL	207	0.680
ANNs+QM	4	VKAPTNGVI	58	0.670

ALLELE: HLA-Cw*0301

Threshold for 4 % with score: 2.015

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	HGYPIREHL	187	3.912
QM	2	AHLRASKPL	67	3.584
QM	3	TAAVSTGRL	47	1.386
QM	4	RASKPLVRL	70	1.386

ALLELE: HLA-Cw*0401

Threshold for 4 % with score: 4.370

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	IPDVISQAL	149	6.960
QM	2	PVKEAAKKL	103	5.580
QM	3	PAIDGAFVL	207	5.100
QM	4	VISQALSEL	152	4.970

ALLELE: HLA-Cw*0602

Threshold for 4 % with score: 1.482

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	IPDVISQAL	149	2.078
QM	2	HGYPIREHL	187	1.792
QM	3	RGGDFDLQL	218	1.792
QM	4	RASKPLVRL	70	1.482

ALLELE: HLA-Cw*0702

Threshold for 4 % with score: 1.212

Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	IPDVISQAL	149	1.463

QM	2	RGGDFDLQL	218	1.212
QM	3	HGYPIREHL	187	0.519
QM	4	EAAWAEIEL	13	0.460

ALLELE: H2-Db				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PAIDGAFVL	207	1.000
ANNs+QM	2	KAPTNGVIA	59	0.950
ANNs+QM	3	SDPGGPVTA	40	0.860
ANNs+QM	4	EAAWAEIEL	13	0.800

ALLELE: H2-Dd				
Threshold for 4 % with score: 11.800				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RGGDFDLQL	218	17.270
QM	2	HGYPIREHL	187	14.600
QM	3	KAPTNGVIA	59	11.990
QM	4	PIREHLNRL	190	11.300

ALLELE: H2-Kb				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	IPDVISQAL	149	0.980
ANNs+QM	2	PAIDGAFVL	207	0.940
ANNs+QM	3	VSDPGGPVT	39	0.920
ANNs+QM	4	RASKPLVRL	70	0.850

ALLELE: H2-Kd				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	EAAWAEIEL	13	0.810
ANNs+QM	2	PAIDGAFVL	207	0.770
ANNs+QM	3	YSAASIEGI	123	0.760
ANNs+QM	4	PVKEAAKKL	103	0.510

ALLELE: H2-Kk				
Threshold for 4 % with score: 1.609				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	FDLQLGTDV	222	3.401
QM	2	YSAASIEGI	123	1.609
QM	3	SDPGGPVTA	40	1.386
QM	4	SDWEPVKEA	99	0.693

ALLELE: H2-Ld				
Threshold for 4 % with score: 4				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	PAIDGAFVL	207	0.950
ANNs+QM	2	SQALSELRL	154	0.680
ANNs+QM	3	RASKPLVRL	70	0.550
ANNs+QM	4	YSAASIEGI	123	0.430

ALLELE: HLA-G				
Threshold for 4 % with score: 9.260				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	PVKEAAKKL	103	12.780

QM	2	PIREHLNRL	190	12.780
QM	3	VISQALSEL	152	9.450
QM	4	EAAWAEIEL	13	8.780

ALLELE: H-2Qa				
Threshold for 4 % with score: 6.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	HGYPIREHL	187	9.300
QM	2	SQALSELRL	154	5.800
QM	3	YSAASIEGI	123	4.500
QM	4	TAAVSTGRL	47	4.470

ALLELE: HLA-B*2706				
Threshold for 4 % with score: 5.000				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	SDWEPVKEA	99	6.000
QM	2	SQALSELRL	154	5.340
QM	3	RGGDFDLQL	218	5.000
QM	4	KAPTNGVIA	59	4.660

ALLELE: HLA-B35				
Threshold for 4 % with score: 8.350				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	IPDVISQAL	149	14.980
QM	2	RASKPLVRL	70	8.920
QM	3	GPVTAAVST	44	8.320
QM	4	AHLRASKPL	67	7.750

ALLELE: Mamu-A*01				
Threshold for 4 % with score: 3.650				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	IPDVISQAL	149	8.380
QM	2	RASKPLVRL	70	3.280
QM	3	TAAVSTGRL	47	2.160
QM	4	HGYPIREHL	187	0.830

ALLELE: HLA-A*0204				
Threshold for 4 % with score: 12.070				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	RASKPLVRL	70	18.980
QM	2	RDLAPVTEA	6	12.200
QM	3	SDWEPVKEA	99	11.960
QM	4	VISQALSEL	152	11.260

ALLELE: HLA-B*2703				
Threshold for 4 % with score: 5.130				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	YRDLAPVTE	5	6.200
QM	2	SQALSELRL	154	5.240
QM	3	EAAWAEIEL	13	5.220
QM	4	SDPGGPVTA	40	2.580

ALLELE: HLA-B*2704				
Threshold for 4 % with score: 8.790				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	VISQALSEL	152	12.020

QM	2	SQALSELRL	154	9.870
QM	3	AHLRASKPL	67	9.460
QM	4	HGYPIREHL	187	7.170

ALLELE: HLA-B*2902				
Threshold for 4 % with score: 7.750				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	PAIDGAFVL	207	10.980
QM	2	FVLTTRGGD	213	6.450
QM	3	GPVTAAVST	44	5.390
QM	4	LTFLCYTAE	250	5.350

ALLELE: HLA-A*3301				
Threshold for 4 % with score: 3.840				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	IIWAPAIDG	203	1.960
QM	2	TAAVSTGRL	47	1.380
QM	3	PTNGVIAHL	61	1.370
QM	4	VSDPGGPVT	39	0.890

ALLELE: HLA-B44				
Threshold for 4 % with score: 4.900				
Prediction method	Rank	Sequence	Residue No.	Peptide Score
QM	1	AAWAEIELE	14	4.770
QM	2	AKKLAFVED	108	4.310
QM	3	EAAWAEIEL	13	3.570
QM	4	APVTEAAWA	9	3.400

ALLELE: HLA-A*6801

Threshold for 4 % with score: 4

Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	AHLRASKPL	67	0.930
ANNs+QM	2	PVKEAAKKL	103	0.650
ANNs+QM	3	YSAASIEGI	123	0.570
ANNs+QM	4	LTFLCYTAE	250	0.490

ALLELE: HLA-A*6802

Threshold for 4 % with score: 4

Prediction method	Rank	Sequence	Residue No.	Peptide Score
ANNs+QM	1	FVLTRGGD	213	1.000
ANNs+QM	2	EAAWAEIEL	13	0.980
ANNs+QM	3	DSDWEPVKE	98	0.980
ANNs+QM	4	PVKEAAKKL	103	0.980