

MHC Class-II Binding Peptide Prediction Results

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INPUT & PARAMETER INFORMATION

Antigen Name	test
Scanned on	Tue Feb 16 16:42:24 2010
Length of input sequence	969 amino acids
Number of nanomers from input sequence	961
Number of nanomers with obligatory P1 anchor residue	307
Threshold setting	3
Number of alleles in query	51
Number of top scorers to be displayed	96

ALLELE: DRB1_0101	Threshold for 3 % with score: 0.14	Highest Score achievable by any peptide: 6
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRRAIAAKS	386	2.6000	43.33
2	YFRMVGRNV	101	2.3900	39.83
3	FRMVGRNVL	102	2.3500	39.17
4	YRRLVNQGY	687	2.0000	33.33
5	FRRQLGRLG	144	1.9900	33.17
6	LVQMLAPLA	866	1.9700	32.83
7	YRFLQRVWR	786	1.8000	30.00
8	VQMLAPLAP	867	1.5000	25.00

9	WIFLQIYNA	174	1.4000	23.33
10	FARAFGLPI	452	1.4000	23.33
11	WRLGNTTS	882	1.2900	21.50
12	YRLVYRADS	229	1.0500	17.50
13	WARLGTFNV	42	1.0000	16.67
14	YLNQMSVPA	485	0.9000	15.00
15	LRLGNTTSL	883	0.8900	14.83
16	LRALHRTIV	817	0.6900	11.50
17	VIVVAGRLV	956	0.6400	10.67
18	LRYTDPHNS	615	0.6000	10.00
19	LVLAPEHDL	347	0.3000	5.00
20	WDFARAFGL	450	0.3000	5.00
21	LVNQGYIQA	690	0.3000	5.00
22	VLHALGFDA	109	0.2000	3.33
23	VALFSARAA	314	0.1700	2.83
24	LRNNTATAK	834	0.1300	2.17
25	YTAELAARL	26	0.1000	1.67
26	LAPLAPHIA	870	0.1000	1.67
27	YRYTAELAA	24	-0.1000	0
28	YRWTQWIFL	169	-0.1000	0
29	MMRITAYAD	276	-0.1000	0
30	VKTMQRNWI	299	-0.1000	0
31	FAALRNNTA	831	-0.1000	0
32	WCPGLGTVL	241	-0.1100	0
33	LHLLYSRFW	663	-0.2100	0
34	LNGMSVPAA	486	-0.2300	0
35	YAINPANGE	412	-0.2600	0
36	VQDMFPYPS	72	-0.3000	0
37	YLVLAPEHD	346	-0.3000	0
38	YIQAYAYTD	695	-0.3000	0
39	VGSLAPPDG	54	-0.3300	0
40	LQRVWRLVV	789	-0.3500	0
41	WRLVVDEHT	793	-0.3500	0
42	FNVPNPVGS	48	-0.4000	0

43	VNWCPLGT	239	-0.4000	0
44	YVGGAEHAV	654	-0.4000	0
45	VVAGRLVNL	958	-0.4000	0
46	YAYTDARGS	699	-0.4100	0
47	VNPLWTYGG	368	-0.5000	0
48	INPANGEPV	414	-0.5000	0
49	VEVIAGGNI	461	-0.6000	0
50	YVPAEQVIE	708	-0.6000	0
51	MGPLEASRP	768	-0.6000	0
52	LAGATPRKV	948	-0.6100	0
53	WQENWARLG	38	-0.6700	0
54	YPSGEGLHV	78	-0.7000	0
55	YAVQTGTHP	125	-0.7100	0
56	VVNFRRQLG	141	-0.7200	0
57	WMMRITAYA	275	-0.8000	0
58	IGRSTGAVA	307	-0.8000	0
59	YVLAGYGTG	429	-0.8000	0
60	VYRADSLVN	232	-0.9000	0
61	VMPQWAGSS	603	-0.9000	0
62	LYVGGAEHA	653	-0.9000	0
63	WTYGGGTPG	372	-0.9100	0
64	VLAGYGTGA	430	-0.9100	0
65	VQAFLAGAT	944	-1.0200	0
66	VRGRVVVAA	919	-1.1000	0
67	IVVAGRLVN	957	-1.1000	0
68	MLAPLAPHI	869	-1.1300	0
69	VGRNVLHAL	105	-1.1600	0
70	LHVGHPLGY	84	-1.2000	0
71	WAKLTAGER	214	-1.2000	0
72	LFGATYLVL	341	-1.2000	0
73	MRITAYADR	277	-1.3000	0
74	YGGGTPGEA	374	-1.3000	0
75	WLFARQRYW	519	-1.3100	0
76	YEMSMGPLE	764	-1.3300	0

77	LPIVEVIAG	458	-1.3500	0
78	VQVNGKVRG	913	-1.3600	0
79	LQIYNAWFD	177	-1.3800	0
80	WFDTTANKA	183	-1.4000	0
81	FGLPIVEVI	456	-1.4000	0
82	VEPLVQMLA	863	-1.4100	0
83	FRKRLRQWM	268	-1.4200	0
84	YSRFWHKVL	667	-1.4200	0
85	YIATDVYAR	92	-1.5000	0
86	VLHLLYSRF	662	-1.5000	0
87	YTDARGSYV	701	-1.5000	0
88	LAPHIAEEL	873	-1.5000	0
89	MVGRNVLHA	104	-1.6000	0
90	VAASWPAGV	360	-1.6000	0
91	LVNSDYLANG	480	-1.6000	0

ALLELE: DRB1_0102	Threshold for 3 % with score: 0.7	Highest Score achievable by any peptide: 6
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Rank	Sequence	At Position	Score	% of Highest Score
1	LVQMLAPLA	866	2.9700	49.50
2	VQMLAPLAP	867	2.5000	41.67
3	FRMVGRNVL	102	2.3500	39.17
4	FRRQLGRLG	144	1.9900	33.17
5	LRLGNTTSL	883	1.8900	31.50
6	LRALHRTIV	817	1.6900	28.17
7	VIVVAGRLV	956	1.6400	27.33
8	YRRAIAAKS	386	1.6000	26.67
9	LRYTDPHNS	615	1.6000	26.67
10	FARAFGLPI	452	1.4000	23.33
11	YFRMVGRNV	101	1.3900	23.17
12	LVLAPEHDL	347	1.3000	21.67
13	LVNQGYYIQA	690	1.3000	21.67
14	VLHALGFDA	109	1.2000	20.00

15	VALFSARAA	314	1.1700	19.50
16	LRNNTATAK	834	1.1300	18.83
17	LAPLAPHIA	870	1.1000	18.33
18	IFIADYVLA	424	1.0000	16.67
19	YRRLVNQGY	687	1.0000	16.67
20	MMRITAYAD	276	0.9000	15.00
21	VKTMQRNWI	299	0.9000	15.00
22	YRFLQRVWR	786	0.8000	13.33
23	LHLLYSRFW	663	0.7900	13.17
24	LNGMSVPAA	486	0.7700	12.83
25	VQDMFPYPS	72	0.7000	11.67
26	VGSLAPPDG	54	0.6700	11.17
27	LQRVWRLVV	789	0.6500	10.83
28	VNWCPLGT	239	0.6000	10.00
29	VVAGRLVNL	958	0.6000	10.00
30	VNPLWTYGG	368	0.5000	8.33
31	INPANGEPV	414	0.5000	8.33
32	WIFLQIYNA	174	0.4000	6.67
33	VEVIAGGNI	461	0.4000	6.67
34	MGPLEASRP	768	0.4000	6.67
35	LAGATPRKV	948	0.3900	6.50
36	WLRLGNTTS	882	0.2900	4.83
37	VVNFRRQLG	141	0.2800	4.67
38	IGRSTGAVA	307	0.2000	3.33
39	VYRADSLVN	232	0.1000	1.67
40	VMPQWAGSS	603	0.1000	1.67
41	LYVGGAEHA	653	0.1000	1.67
42	VLAGYGTGA	430	0.0900	1.50
43	YRLVYRADS	229	0.0500	0.83
44	VQAFLAGAT	944	-0.0200	0
45	YLNMGMSVPA	485	-0.1000	0
46	FAALRNNTA	831	-0.1000	0
47	VRGRVVVAA	919	-0.1000	0
48	IVVAGRLVN	957	-0.1000	0

49	MLAPLAPHI	869	-0.1300	0
50	VGRNVLHAL	105	-0.1600	0
51	LHVGHPLGY	84	-0.2000	0
52	LFGATYLV	341	-0.2000	0
53	MRITAYADR	277	-0.3000	0
54	LPIVEVIAG	458	-0.3500	0
55	VQVNGKVRG	913	-0.3600	0
56	LQIYNAWFD	177	-0.3800	0
57	FNVPNPVGS	48	-0.4000	0
58	VEPLVQMLA	863	-0.4100	0
59	VLHLLYSRF	662	-0.5000	0
60	LAPHIAEEL	873	-0.5000	0
61	MVGRNVLHA	104	-0.6000	0
62	VAASWPAGV	360	-0.6000	0
63	LVNSDYLV	480	-0.6000	0
64	VPIFIADYV	422	-0.6200	0
65	VLANEEVTA	248	-0.6600	0
66	WDFARAFGL	450	-0.7000	0
67	IMAVPGHDQ	439	-0.7500	0
68	VVGAYRFLQ	782	-0.8000	0
69	YTAELAARL	26	-0.9000	0
70	LVAEFESGA	197	-0.9000	0
71	LFSARAASD	316	-0.9000	0
72	VFQEFQKIG	732	-0.9000	0
73	LGHVSSREP	678	-0.9600	0
74	LFVQDMFPY	70	-1.0000	0
75	VGHPLGYIA	86	-1.0000	0
76	LVDELVAAS	355	-1.0000	0
77	VGGAEHAVL	655	-1.0000	0
78	VPRAAVEPL	858	-1.0000	0
79	LVAASWPAG	359	-1.0300	0
80	LEASRPWAT	771	-1.0800	0
81	YRYTAELAA	24	-1.1000	0
82	YRWTQWIFL	169	-1.1000	0

83	VLYDLGHVS	674	-1.1000	0
84	IDTLRALHR	814	-1.1000	0
85	WCPGLGTVL	241	-1.1100	0
86	LRVYEMSMG	761	-1.2000	0
87	YAINPANGE	412	-1.2600	0
88	LVNWCPGLG	238	-1.3000	0
89	YLVLAPEHD	346	-1.3000	0
90	VDRLESAGR	499	-1.3000	0
91	LYDLGHVSS	675	-1.3000	0

ALLELE: DRB1_0301		Threshold for 3 % with score: 2.96	Highest Score achievable by any peptide: 9.5	
Rank	Sequence	At Position	Score	% of Highest Score
1	VLTDEKVQA	938	4.8000	50.53
2	VNSDYLNMG	481	4.5100	47.47
3	LVVDEHTGE	795	4.4000	46.32
4	LRLGNTTSL	883	4.3600	45.89
5	YRLVYRADS	229	4.3000	45.26
6	FIADYVLAG	425	4.2000	44.21
7	YLVDETVEY	903	4.1000	43.16
8	MQRNWIGRS	302	4.0000	42.11
9	VTADGRSDR	254	3.8700	40.74
10	VQVNGKVRG	913	3.8000	40.00
11	VLYDLGHVS	674	3.7000	38.95
12	YRFLQRVWR	786	3.7000	38.95
13	VVGAYRFLQ	782	3.6000	37.89
14	FRMVGRNVL	102	3.4700	36.53
15	LQRVWRLVV	789	3.4000	35.79
16	LRALHRTIV	817	3.4000	35.79
17	IVVAGRLVN	957	3.2000	33.68
18	IERGDRFVY	715	3.1000	32.63
19	FGHDSRRSF	153	3.0000	31.58
20	YRRAIAAKS	386	3.0000	31.58

21	LPIVEVIAG	458	3.0000	31.58
22	VSPDEICDA	747	3.0000	31.58
23	VQMLAPLAP	867	3.0000	31.58
24	VVAGRLVNL	958	2.9600	31.16
25	VVNFRRQLG	141	2.9000	30.53
26	YRADSLVNW	233	2.9000	30.53
27	LNGMSVPAA	486	2.9000	30.53
28	LHRTIVGVS	820	2.9000	30.53
29	LHVGHPLGY	84	2.8000	29.47
30	LGDGLKPYS	590	2.8000	29.47
31	LRYTDPHNS	615	2.8000	29.47
32	LVQMLAPLA	866	2.8000	29.47
33	VRGRVVVAA	919	2.8000	29.47
34	IGKSLKNSV	739	2.7100	28.53
35	MVGRNVLHA	104	2.7000	28.42
36	MSMGPLEAS	766	2.7000	28.42
37	VKTMQRNWI	299	2.6100	27.47
38	LVNWCPGLG	238	2.6000	27.37
39	IVYDSDGRP	533	2.6000	27.37
40	VMPQWAGSS	603	2.6000	27.37
41	LKNSVSPDE	743	2.6000	27.37
42	LRNNTATAK	834	2.6000	27.37
43	IAGGNISES	464	2.5700	27.05
44	LVNSDYLNG	480	2.5000	26.32
45	FVQDMFPYP	71	2.4000	25.26
46	VGSLAPPDG	54	2.3000	24.21
47	LGYIATDVY	90	2.3000	24.21
48	VELPDVPDY	551	2.3000	24.21
49	VNPLWTYGG	368	2.2500	23.68
50	FRKRLRQWM	268	2.2000	23.16
51	YWMGPRPAE	634	2.2000	23.16
52	VNQGYIQAY	691	2.2000	23.16
53	LVDELVAAS	355	2.1000	22.11
54	YGTGAIMAV	434	2.1000	22.11

55	LGFDAFGLP	113	2.0000	21.05
56	VVAADTDEE	924	2.0000	21.05
57	YDS DGRPHA	535	1.9000	20.00
58	VQTGTHPRT	127	1.8000	18.95
59	LTAGERADV	217	1.8000	18.95
60	MRITAYADR	277	1.8000	18.95
61	LVAASWPAG	359	1.8000	18.95
62	YTGDGILVN	474	1.8000	18.95
63	FLAGATPRK	947	1.8000	18.95
64	LDIDTLRAL	812	1.7600	18.53
65	LYVGGAEHA	653	1.7000	17.89
66	MMRITAYAD	276	1.6500	17.37
67	LVNQGYIQA	690	1.6000	16.84
68	WIFLQIYNA	174	1.5500	16.32
69	VAASWPAGV	360	1.5000	15.79
70	YRRLVNQGY	687	1.5000	15.79
71	VQDMFPYPS	72	1.4500	15.26
72	LESAGRGRA	502	1.4000	14.74
73	YGADTLRVY	756	1.4000	14.74
74	VELDIDTLR	810	1.4000	14.74
75	VNGKVRGRV	915	1.4000	14.74
76	WARLGTFNV	42	1.3000	13.68
77	WMMRITAYA	275	1.3000	13.68
78	WVHVLDLDG	583	1.3000	13.68
79	VSEDFAALR	827	1.3000	13.68
80	MLAPLAPHI	869	1.3000	13.68
81	LRVYEMSMG	761	1.2700	13.37
82	LFVQDMFPY	70	1.2000	12.63
83	IATDVYARY	93	1.2000	12.63
84	YARYFRMVG	98	1.2000	12.63
85	IGRSTGAVA	307	1.2000	12.63
86	YVLAGYGTG	429	1.2000	12.63
87	VEPLVQMLA	863	1.2000	12.63
88	FGKIGKSLK	736	1.1700	12.32

89	VPRAAVEPL	858	1.1600	12.21
90	LFARQRYWG	520	1.1500	12.11
91	LGTFNVPNP	45	1.1000	11.58
92	FNVNPNVGS	48	1.1000	11.58
93	VYRADSLVN	232	1.1000	11.58
94	IFIADYVLA	424	1.1000	11.58
95	FGLPIVEVI	456	1.1000	11.58
96	VEVIAGGNI	461	1.1000	11.58

Rank	Sequence	At Position	Score	% of Highest Score
ALLELE: DRB1_0305		Threshold for 3 % with score: 1.7	Highest Score achievable by any peptide: 9.1	
1	YRLVYRADS	229	4.9000	53.85
2	YRADSLVNW	233	3.9000	42.86
3	FIADYVLAG	425	3.8000	41.76
4	YLVDETVEY	903	3.8000	41.76
5	VLTDEKVQA	938	3.8000	41.76
6	YRRAIAAKS	386	3.6000	39.56
7	FRMVGRNVL	102	3.5100	38.57
8	VVGAYRFLQ	782	3.3000	36.26
9	YRFLQRVWR	786	3.2000	35.16
10	YSDGRPHA	535	2.9000	31.87
11	FLAGATPRK	947	2.7000	29.67
12	MQRNWIGRS	302	2.6000	28.57
13	WIFLQIYNA	174	2.5500	28.02
14	FVQDMFPYP	71	2.4000	26.37
15	LRLGNTTSL	883	2.4000	26.37
16	WMMRITAYA	275	2.3000	25.27
17	VLYDLGHVS	674	2.3000	25.27
18	FGHDSRRSF	153	2.1000	23.08
19	YGTGAIMAV	434	2.1000	23.08
20	YLANGMSVPA	485	2.1000	23.08
21	FGKIGKSLK	736	2.0700	22.75

22	VNSDYLNMG	481	2.0100	22.09
23	YTG DGILVN	474	2.0000	21.98
24	VSPDEICDA	747	2.0000	21.98
25	LVVDEHTGE	795	2.0000	21.98
26	LNGMSVPAA	486	1.9000	20.88
27	YGGGTPGEA	374	1.8000	19.78
28	YWMGPRPAE	634	1.8000	19.78
29	LVQMLAPLA	866	1.8000	19.78
30	VRGRVVVAA	919	1.8000	19.78
31	FNVPNVGS	48	1.7000	18.68
32	MVGRNVLHA	104	1.7000	18.68
33	FRKRLRQWM	268	1.7000	18.68
34	WLRLGNTTS	882	1.7000	18.68
35	LHRTIVGVS	820	1.5000	16.48
36	LRNNTATAK	834	1.5000	16.48
37	LGDGLKPYS	590	1.4000	15.38
38	LRYTDPHNS	615	1.4000	15.38
39	LQRVWRLVV	789	1.4000	15.38
40	LRALHRTIV	817	1.4000	15.38
41	VQVNGKVRG	913	1.4000	15.38
42	IVVAGRLVN	957	1.4000	15.38
43	VTADGRSDR	254	1.3700	15.05
44	WARLGTFNV	42	1.3000	14.29
45	MSMGPLEAS	766	1.3000	14.29
46	FGLPIVEVI	456	1.2000	13.19
47	VMPQWAGSS	603	1.2000	13.19
48	YRRLVNQGY	687	1.2000	13.19
49	IAGGNISES	464	1.1700	12.86
50	YGADTLRVY	756	1.1000	12.09
51	FLGSYAINP	408	1.0000	10.99
52	YSRDTNVMP	597	1.0000	10.99
53	VQMLAPLAP	867	1.0000	10.99
54	VVAGRLVNL	958	1.0000	10.99
55	WVHVLDLDG	583	0.9000	9.89

56	WMGPRPAEH	635	0.8800	9.67
57	YRYTAELAA	24	0.8000	8.79
58	YARYFRMVG	98	0.8000	8.79
59	YVLAGYGTG	429	0.8000	8.79
60	IERGDRFVY	715	0.8000	8.79
61	VKTMQRNWI	299	0.7100	7.80
62	IGKSLKNSV	739	0.7100	7.80
63	VPDDKLFVQ	65	0.7000	7.69
64	LVDELVAAS	355	0.7000	7.69
65	LYVGGAEHA	653	0.7000	7.69
66	LPIVEVIAG	458	0.6000	6.59
67	IVYDSDGRP	533	0.6000	6.59
68	LVNQGYYQA	690	0.6000	6.59
69	YVPAEQVIE	708	0.6000	6.59
70	LHVGHPLGY	84	0.5000	5.49
71	VVNFRRQLG	141	0.5000	5.49
72	WIGRSTGAV	306	0.5000	5.49
73	FEVDIEVFT	327	0.5000	5.49
74	YEMSMGPLE	764	0.5000	5.49
75	YTNHLTKKH	846	0.4800	5.27
76	YDLGHVSSR	676	0.4700	5.16
77	LESAGRGRA	502	0.4000	4.40
78	FQEF GKIGK	733	0.4000	4.40
79	WATKDVVGA	777	0.4000	4.40
80	YELRYTDPH	613	0.3800	4.18
81	FRRQLGRLG	144	0.3000	3.30
82	VWRLVVDEH	792	0.2800	3.08
83	YIATDVYAR	92	0.2500	2.75
84	LVNWCPGLG	238	0.2000	2.20
85	IGRSTGAVA	307	0.2000	2.20
86	LKNSVSPDE	743	0.2000	2.20
87	VEPLVQMLA	863	0.2000	2.20
88	VQTGTHPRT	127	0.1000	1.10
89	FESGARCLD	201	0.1000	1.10

90	YLVLAPEHD	346	0.1000	1.10
91	IFIADYVLA	424	0.1000	1.10
92	LVNSDYLNQ	480	0.1000	1.10
93	FVYPPDGE	721	0.1000	1.10
94	VQDMFPYPS	72	0.0500	0.55

ALLELE: DRB1_0306	Threshold for 3 % with score: 2.08	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	VLTDEKVQA	938	4.6800	53.18
2	VLYDLGHVS	674	4.1000	46.59
3	YRLVYRADS	229	3.9000	44.32
4	VNSDYLNQM	481	3.7000	42.05
5	LRLGNTTSL	883	3.4000	38.64
6	FIADYVLAG	425	3.3000	37.50
7	FRMVGRNVL	102	3.2000	36.36
8	MVGRNVLHA	104	3.2000	36.36
9	LRYTDPHNS	615	3.2000	36.36
10	VSPDEICDA	747	3.0000	34.09
11	LVVDEHTGE	795	3.0000	34.09
12	LQRVWRLVV	789	2.9000	32.95
13	IVVAGRLVN	957	2.9000	32.95
14	VVGAYRFLQ	782	2.8000	31.82
15	YRADSLVNW	233	2.7800	31.59
16	MSMGPLEAS	766	2.7000	30.68
17	YLVDETVEY	903	2.6800	30.45
18	VRGRVVVAA	919	2.6800	30.45
19	YRRAIAAKS	386	2.6000	29.55
20	LRNNTATAK	834	2.5000	28.41
21	VQMLAPLAP	867	2.5000	28.41
22	VKTMQRNWI	299	2.4000	27.27
23	IGKSLKNSV	739	2.4000	27.27
24	LRALHRTIV	817	2.4000	27.27

25	VQVNGKVRG	913	2.2800	25.91
26	MQRNWIGRS	302	2.2000	25.00
27	VTADGRSDR	254	2.1000	23.86
28	LYVGGAEHA	653	2.1000	23.86
29	YRFLQRVWR	786	2.0800	23.64
30	LHVGHPLGY	84	2.0000	22.73
31	IAGGNISES	464	1.9000	21.59
32	VVAGRLVNL	958	1.8800	21.36
33	LVDELVAAS	355	1.7000	19.32
34	VVNFRRQLG	141	1.6000	18.18
35	LVNSDYLNG	480	1.6000	18.18
36	VWRLVVDEH	792	1.5800	17.95
37	YTG DGILVN	474	1.5000	17.05
38	LNGMSVPAA	486	1.5000	17.05
39	LVQMLAPLA	866	1.4000	15.91
40	LGYIATDVY	90	1.3000	14.77
41	WMMRITAYA	275	1.3000	14.77
42	LPIVEVIAG	458	1.2800	14.55
43	LVNQGYIQA	690	1.2800	14.55
44	IGRSTGAVA	307	1.2000	13.64
45	LHRTIVGVS	820	1.1000	12.50
46	LGSYAINPA	409	1.0000	11.36
47	LGDGLKPYS	590	1.0000	11.36
48	VNQGYIQAY	691	1.0000	11.36
49	IFIADYVLA	424	0.9800	11.14
50	YLN GMSVPA	485	0.9800	11.14
51	IMAVPGHDQ	439	0.9000	10.23
52	VEPLVQMLA	863	0.9000	10.23
53	VVAADTDEE	924	0.9000	10.23
54	FGHDSRRSF	153	0.8000	9.09
55	LTAGERADV	217	0.8000	9.09
56	VYRADSLVN	232	0.8000	9.09
57	FRKRLRQWM	268	0.8000	9.09
58	YGTGAIMAV	434	0.8000	9.09

59	VMPQWAGSS	603	0.8000	9.09
60	FGKIGKSLK	736	0.8000	9.09
61	LAPLAPHIA	870	0.8000	9.09
62	LVLAPEHDL	347	0.7000	7.95
63	VLAGYGTGA	430	0.7000	7.95
64	WRLGNTTS	882	0.7000	7.95
65	LGNTTSLAH	885	0.6800	7.73
66	VGRNVLHAL	105	0.6000	6.82
67	FGLPIVEVI	456	0.6000	6.82
68	IVGVSEDF	824	0.6000	6.82
69	VPRAAVEPL	858	0.6000	6.82
70	FNVPNPVGS	48	0.5800	6.59
71	VAASWPAGV	360	0.5000	5.68
72	YDSDGRPHA	535	0.5000	5.68
73	LDIDTLRAL	812	0.5000	5.68
74	WIFLQIYNA	174	0.4000	4.55
75	YRYTAEAL	24	0.3000	3.41
76	MRITAYADR	277	0.3000	3.41
77	YRRLVNQGY	687	0.3000	3.41
78	IERGDRFVY	715	0.3000	3.41
79	FLAGATPRK	947	0.3000	3.41
80	VAGRLVNLV	959	0.3000	3.41
81	LYDLGHVSS	675	0.2800	3.18
82	VPDDKLFVQ	65	0.2000	2.27
83	IVYDSDGRP	533	0.2000	2.27
84	WVHVLDLGL	583	0.2000	2.27
85	VHVLDLGLD	584	0.2000	2.27
86	IEYTNHLTK	844	0.2000	2.27
87	YTNHLTKKH	846	0.0800	0.91
88	VQDMFPYPS	72	-0.1000	0
89	IATDVYARY	93	-0.1000	0

ALLELE: DRB1_0307 Threshold for 3 % with score: Highest Score achievable by any peptide:

2.08

8.8

Rank	Sequence	At Position	Score	% of Highest Score
1	VLTDEKVQA	938	4.6800	53.18
2	VLYDLGHVS	674	4.1000	46.59
3	YRLVYRADS	229	3.9000	44.32
4	VNSDYLNMG	481	3.7000	42.05
5	LRLGNTTSL	883	3.4000	38.64
6	FIADYVLAG	425	3.3000	37.50
7	FRMVGRNVL	102	3.2000	36.36
8	MVGRNVLHA	104	3.2000	36.36
9	LRYTDPHNS	615	3.2000	36.36
10	VSPDEICDA	747	3.0000	34.09
11	LVVDEHTGE	795	3.0000	34.09
12	LQRVWRLVV	789	2.9000	32.95
13	IVVAGRLVN	957	2.9000	32.95
14	VVGAYRFLQ	782	2.8000	31.82
15	YRADSLVNW	233	2.7800	31.59
16	MSMGPLEAS	766	2.7000	30.68
17	YLVDETVEY	903	2.6800	30.45
18	VRGRVVVAA	919	2.6800	30.45
19	YRRAIAAKS	386	2.6000	29.55
20	LRNNTATAK	834	2.5000	28.41
21	VQMLAPLAP	867	2.5000	28.41
22	VKTMQRNWI	299	2.4000	27.27
23	IGKSLKNSV	739	2.4000	27.27
24	LRALHRTIV	817	2.4000	27.27
25	VQVNGKVRG	913	2.2800	25.91
26	MQRNWIGRS	302	2.2000	25.00
27	VTADGRSDR	254	2.1000	23.86
28	LYVGGAEHA	653	2.1000	23.86
29	YRFLQRVWR	786	2.0800	23.64
30	LHVGHPLGY	84	2.0000	22.73
31	IAGGNISES	464	1.9000	21.59
32	VVAGRLVNL	958	1.8800	21.36

33	LVDELVAAS	355	1.7000	19.32
34	VVNFRRQLG	141	1.6000	18.18
35	LVNSDYLNQ	480	1.6000	18.18
36	VWRLVVDEH	792	1.5800	17.95
37	YTG DGILVN	474	1.5000	17.05
38	LNGMSVPAA	486	1.5000	17.05
39	LVQMLAPLA	866	1.4000	15.91
40	LGYIATDVY	90	1.3000	14.77
41	WMMRITAYA	275	1.3000	14.77
42	LPIVEVIAG	458	1.2800	14.55
43	LVNQGYIQA	690	1.2800	14.55
44	IGRSTGAVA	307	1.2000	13.64
45	LHRTIVGVS	820	1.1000	12.50
46	LGSYAINPA	409	1.0000	11.36
47	LGDGLKPYS	590	1.0000	11.36
48	VNQGYIQAY	691	1.0000	11.36
49	IFIADYVLA	424	0.9800	11.14
50	YLNQMSVPA	485	0.9800	11.14
51	IMAVPGHDQ	439	0.9000	10.23
52	VEPLVQMLA	863	0.9000	10.23
53	VVAADTDEE	924	0.9000	10.23
54	FGHDSRRSF	153	0.8000	9.09
55	LTAGERADV	217	0.8000	9.09
56	VYRADSLVN	232	0.8000	9.09
57	FRKRLRQWM	268	0.8000	9.09
58	YGTGAIMAV	434	0.8000	9.09
59	VMPQWAGSS	603	0.8000	9.09
60	FGKIGKSLK	736	0.8000	9.09
61	LAPLAPHIA	870	0.8000	9.09
62	LVLAPEHDL	347	0.7000	7.95
63	VLAGYGTGA	430	0.7000	7.95
64	WLRLGNTTS	882	0.7000	7.95
65	LGNTTSLAH	885	0.6800	7.73
66	VGRNVLHAL	105	0.6000	6.82

67	FGLPIVEVI	456	0.6000	6.82
68	IVGVSEDF	824	0.6000	6.82
69	VPRAAVEPL	858	0.6000	6.82
70	FNVPNPVGS	48	0.5800	6.59
71	VAASWPAGV	360	0.5000	5.68
72	YDSDGRPHA	535	0.5000	5.68
73	LDIDTLRAL	812	0.5000	5.68
74	WIFLQIYNA	174	0.4000	4.55
75	YRYTAEAL	24	0.3000	3.41
76	MRITAYADR	277	0.3000	3.41
77	YRRLVNQGY	687	0.3000	3.41
78	IERGDRFVY	715	0.3000	3.41
79	FLAGATPRK	947	0.3000	3.41
80	VAGRLVNLV	959	0.3000	3.41
81	LYDLGHVSS	675	0.2800	3.18
82	VPDDKLFVQ	65	0.2000	2.27
83	IVYDSDGRP	533	0.2000	2.27
84	WVHVLDLGL	583	0.2000	2.27
85	VHVLDLGLD	584	0.2000	2.27
86	IEYTNHLTK	844	0.2000	2.27
87	YTNHLTKKH	846	0.0800	0.91
88	VQDMFPYPS	72	-0.1000	0
89	IATDVYARY	93	-0.1000	0

ALLELE: DRB1_0308	Threshold for 3 % with score: 2.08	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	VLTDEKVQA	938	4.6800	53.18
2	VLYDLGHVS	674	4.1000	46.59
3	YRLVYRADS	229	3.9000	44.32
4	VNSDYLNMG	481	3.7000	42.05
5	LRLGNTTSL	883	3.4000	38.64
6	FIADYVLAG	425	3.3000	37.50

7	FRMVGRNVL	102	3.2000	36.36
8	MVGRNVLHA	104	3.2000	36.36
9	LRYTDPHNS	615	3.2000	36.36
10	VSPDEICDA	747	3.0000	34.09
11	LVVDEHTGE	795	3.0000	34.09
12	LQRVWRLVV	789	2.9000	32.95
13	IVVAGRLVN	957	2.9000	32.95
14	VVGAYRFLQ	782	2.8000	31.82
15	YRADSLVNW	233	2.7800	31.59
16	MSMGPLEAS	766	2.7000	30.68
17	YLVDETVEY	903	2.6800	30.45
18	VRGRVVVAA	919	2.6800	30.45
19	YRRAIAAKS	386	2.6000	29.55
20	LRNNTATAK	834	2.5000	28.41
21	VQMLAPLAP	867	2.5000	28.41
22	VKTMQRNWI	299	2.4000	27.27
23	IGKSLKNSV	739	2.4000	27.27
24	LRALHRTIV	817	2.4000	27.27
25	VQVNGKVRG	913	2.2800	25.91
26	MQRNWIGRS	302	2.2000	25.00
27	VTADGRSDR	254	2.1000	23.86
28	LYVGGAEHA	653	2.1000	23.86
29	YRFLQRVWR	786	2.0800	23.64
30	LHVGHPLGY	84	2.0000	22.73
31	IAGGNISES	464	1.9000	21.59
32	VVAGRLVNL	958	1.8800	21.36
33	LVDELVAAS	355	1.7000	19.32
34	VVNFRRQLG	141	1.6000	18.18
35	LVNSDYLNQ	480	1.6000	18.18
36	VWRLVVDEH	792	1.5800	17.95
37	YTG DGILVN	474	1.5000	17.05
38	LNGMSVPAA	486	1.5000	17.05
39	LVQMLAPLA	866	1.4000	15.91
40	LGYIATDVY	90	1.3000	14.77

41	WMMRITAYA	275	1.3000	14.77
42	LPIVEVIAG	458	1.2800	14.55
43	LVNQGYIQA	690	1.2800	14.55
44	IGRSTGAVA	307	1.2000	13.64
45	LHRTIVGVS	820	1.1000	12.50
46	LGSYAINPA	409	1.0000	11.36
47	LGDGLKPYS	590	1.0000	11.36
48	VNQGYYIQAY	691	1.0000	11.36
49	IFIADYVLA	424	0.9800	11.14
50	YLNQMSVPA	485	0.9800	11.14
51	IMAVPGHDQ	439	0.9000	10.23
52	VEPLVQMLA	863	0.9000	10.23
53	VVAADTDEE	924	0.9000	10.23
54	FGHDSRRSF	153	0.8000	9.09
55	LTAGERADV	217	0.8000	9.09
56	VYRADSLVN	232	0.8000	9.09
57	FRKRLRQWM	268	0.8000	9.09
58	YGTGAIMAV	434	0.8000	9.09
59	VMPQWAGSS	603	0.8000	9.09
60	FGKIGKSLK	736	0.8000	9.09
61	LAPLAPHIA	870	0.8000	9.09
62	LVLAPEHDL	347	0.7000	7.95
63	VLAGYGTGA	430	0.7000	7.95
64	WRLGNTTS	882	0.7000	7.95
65	LGNTTSLAH	885	0.6800	7.73
66	VGRNVLHAL	105	0.6000	6.82
67	FGLPIVEVI	456	0.6000	6.82
68	IVGVSEDF	824	0.6000	6.82
69	VPRAAVEPL	858	0.6000	6.82
70	FNVPNPVGS	48	0.5800	6.59
71	VAASWPAGV	360	0.5000	5.68
72	YDSDGRPHA	535	0.5000	5.68
73	LDIDTLRAL	812	0.5000	5.68
74	WIFLQIYNA	174	0.4000	4.55

75	YRYTAELAA	24	0.3000	3.41
76	MRITAYADR	277	0.3000	3.41
77	YRRLVNQGY	687	0.3000	3.41
78	IERGDRFVY	715	0.3000	3.41
79	FLAGATPRK	947	0.3000	3.41
80	VAGRLVNLV	959	0.3000	3.41
81	LYDLGHVSS	675	0.2800	3.18
82	VPDDKLFVQ	65	0.2000	2.27
83	IVYDSGRP	533	0.2000	2.27
84	WVHVLDLGL	583	0.2000	2.27
85	VHVLDLGLD	584	0.2000	2.27
86	IEYTNHLTK	844	0.2000	2.27
87	YTNHLTKKH	846	0.0800	0.91
88	VQDMFPYPS	72	-0.1000	0
89	IATDVYARY	93	-0.1000	0

ALLELE: DRB1_0309	Threshold for 3 % with score: 2.4	Highest Score achievable by any peptide: 9.5
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRLVYRADS	229	5.3000	55.79
2	FIADYVLAG	425	5.2000	54.74
3	YLVDETVEY	903	5.1000	53.68
4	YRFLQRVWR	786	4.7000	49.47
5	FRMVGRNVL	102	4.4700	47.05
6	FGHDSRRSF	153	4.0000	42.11
7	YRRAIAAKS	386	4.0000	42.11
8	YRADSLVNW	233	3.9000	41.05
9	VLTDEKVQA	938	3.8000	40.00
10	VNSDYLNMG	481	3.5100	36.95
11	FVQDMFPYP	71	3.4000	35.79
12	LVVDEHTGE	795	3.4000	35.79
13	LRLGNTTSL	883	3.3600	35.37
14	FRKRLRQWM	268	3.2000	33.68

15	YWMGPRPAE	634	3.2000	33.68
16	YGTGAIMAV	434	3.1000	32.63
17	MQRNWIGRS	302	3.0000	31.58
18	YDSDGRPHA	535	2.9000	30.53
19	VTADGRSDR	254	2.8700	30.21
20	YTG DGILVN	474	2.8000	29.47
21	VQVNGKVRG	913	2.8000	29.47
22	FLAGATPRK	947	2.8000	29.47
23	VLYDLGHVS	674	2.7000	28.42
24	VVGAYRFLQ	782	2.6000	27.37
25	WIFLQIYNA	174	2.5500	26.84
26	YRRLVNQGY	687	2.5000	26.32
27	YGADTLRVY	756	2.4000	25.26
28	LQRVWRLVV	789	2.4000	25.26
29	LRALHRTIV	817	2.4000	25.26
30	WARLGT FNV	42	2.3000	24.21
31	WMMRITAYA	275	2.3000	24.21
32	WVHVLDLDL G	583	2.3000	24.21
33	YARYFRMVG	98	2.2000	23.16
34	YVLAGYGTG	429	2.2000	23.16
35	IVVAGRLVN	957	2.2000	23.16
36	FGKIGKSLK	736	2.1700	22.84
37	FNVPNPVGS	48	2.1000	22.11
38	FGLPIVEVI	456	2.1000	22.11
39	YLN GMSVPA	485	2.1000	22.11
40	IERGDRFVY	715	2.1000	22.11
41	WLRLGNTTS	882	2.1000	22.11
42	FLGSYAINP	408	2.0000	21.05
43	LPIVEVIAG	458	2.0000	21.05
44	YSRDTNVMP	597	2.0000	21.05
45	YVP AEQVIE	708	2.0000	21.05
46	VSPDEICDA	747	2.0000	21.05
47	VQMLAPLAP	867	2.0000	21.05
48	YDLGHVSSR	676	1.9700	20.74

49	VVAGRLVNL	958	1.9600	20.63
50	VVNFRRQLG	141	1.9000	20.00
51	LNGMSVPAA	486	1.9000	20.00
52	YEMSMGPLE	764	1.9000	20.00
53	LHRTIVGVS	820	1.9000	20.00
54	LHVGHPLGY	84	1.8000	18.95
55	FLQIYNAWF	176	1.8000	18.95
56	YGGGTPGEA	374	1.8000	18.95
57	LGDGLKPYS	590	1.8000	18.95
58	LRYTDPHNS	615	1.8000	18.95
59	LVQMLAPLA	866	1.8000	18.95
60	VRGRVVVAA	919	1.8000	18.95
61	YIATDVYAR	92	1.7500	18.42
62	IGKSLKNSV	739	1.7100	18.00
63	MVGRNVLHA	104	1.7000	17.89
64	FRRQLGRLG	144	1.7000	17.89
65	MSMGPLEAS	766	1.7000	17.89
66	VKTMQRNWI	299	1.6100	16.95
67	LVNWCPGLG	238	1.6000	16.84
68	IVYDSGRP	533	1.6000	16.84
69	VMPQWAGSS	603	1.6000	16.84
70	LKNSVSPDE	743	1.6000	16.84
71	LRNNTATAK	834	1.6000	16.84
72	IAGGNISES	464	1.5700	16.53
73	WIGRSTGAV	306	1.5000	15.79
74	LVNSDYLNG	480	1.5000	15.79
75	FVYPGPDGE	721	1.5000	15.79
76	YAINPANGE	412	1.3100	13.79
77	VGSLAPPDG	54	1.3000	13.68
78	LGYIATDVY	90	1.3000	13.68
79	VELPDVPDY	551	1.3000	13.68
80	VNPLWTYGG	368	1.2500	13.16
81	FESGARCLD	201	1.2000	12.63
82	FEVDIEVFT	327	1.2000	12.63

83	YLVLAPEHD	346	1.2000	12.63
84	VNQGVIQAY	691	1.2000	12.63
85	LVDELVAAS	355	1.1000	11.58
86	LGFDAFGLP	113	1.0000	10.53
87	VVAADTDEE	924	1.0000	10.53
88	WTYGGGTPG	372	0.9000	9.47
89	YVGGAEHAV	654	0.9000	9.47
90	YRYTAELAA	24	0.8000	8.42
91	VQTGTHPRT	127	0.8000	8.42
92	LTAGERADV	217	0.8000	8.42
93	MRITAYADR	277	0.8000	8.42
94	LVAASWPAG	359	0.8000	8.42
95	FARAFGLPI	452	0.8000	8.42
96	LDIDTLRAL	812	0.7600	8.00

ALLELE: DRB1_0311	Threshold for 3 % with score: 2.08	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	VLTDEKVQA	938	4.6800	53.18
2	VLYDLGHVS	674	4.1000	46.59
3	YRLVYRADS	229	3.9000	44.32
4	VNSDYLNMG	481	3.7000	42.05
5	LRLGNTTSL	883	3.4000	38.64
6	FIADYVLAG	425	3.3000	37.50
7	FRMVGRNVL	102	3.2000	36.36
8	MVGRNVLHA	104	3.2000	36.36
9	LRYTDPHNS	615	3.2000	36.36
10	VSPDEICDA	747	3.0000	34.09
11	LVVDEHTGE	795	3.0000	34.09
12	LQRVWRLVV	789	2.9000	32.95
13	IVVAGRLVN	957	2.9000	32.95
14	VVGAYRFLQ	782	2.8000	31.82
15	YRADSLVNW	233	2.7800	31.59

16	MSMGPLEAS	766	2.7000	30.68
17	YLVDETVEY	903	2.6800	30.45
18	VRGRVVVAA	919	2.6800	30.45
19	YRRAIAAKS	386	2.6000	29.55
20	LRNNTATAK	834	2.5000	28.41
21	VQMLAPLAP	867	2.5000	28.41
22	VKTMQRNWI	299	2.4000	27.27
23	IGKSLKNSV	739	2.4000	27.27
24	LRALHRTIV	817	2.4000	27.27
25	VQVNGKVRG	913	2.2800	25.91
26	MQRNWIGRS	302	2.2000	25.00
27	VTADGRSDR	254	2.1000	23.86
28	LYVGGAEHA	653	2.1000	23.86
29	YRFLQRVWR	786	2.0800	23.64
30	LHVGHPLGY	84	2.0000	22.73
31	IAGGNISES	464	1.9000	21.59
32	VVAGRLVNL	958	1.8800	21.36
33	LVDELVAAS	355	1.7000	19.32
34	VVNFRRQLG	141	1.6000	18.18
35	LVNSDYLNG	480	1.6000	18.18
36	VWRLVVDEH	792	1.5800	17.95
37	YTG DGILVN	474	1.5000	17.05
38	LNGMSVPAA	486	1.5000	17.05
39	LVQMLAPLA	866	1.4000	15.91
40	LGYIATDVY	90	1.3000	14.77
41	WMMRITAYA	275	1.3000	14.77
42	LPIVEVIAG	458	1.2800	14.55
43	LVNQGYIQA	690	1.2800	14.55
44	IGRSTGAVA	307	1.2000	13.64
45	LHRTIVGVS	820	1.1000	12.50
46	LGSYAINPA	409	1.0000	11.36
47	LGDGLKPYS	590	1.0000	11.36
48	VNQGYIQAY	691	1.0000	11.36
49	IFIADYVLA	424	0.9800	11.14

50	YLNGMSVPA	485	0.9800	11.14
51	IMAVPGHDQ	439	0.9000	10.23
52	VEPLVQMLA	863	0.9000	10.23
53	VVAADTDEE	924	0.9000	10.23
54	FGHDSRRSF	153	0.8000	9.09
55	LTAGERADV	217	0.8000	9.09
56	VYRADSLVN	232	0.8000	9.09
57	FRKRLRQWM	268	0.8000	9.09
58	YGTGAIMAV	434	0.8000	9.09
59	VMPQWAGSS	603	0.8000	9.09
60	FGKIGKSLK	736	0.8000	9.09
61	LAPLAPHIA	870	0.8000	9.09
62	LVLAPEHDL	347	0.7000	7.95
63	VLAGYGTGA	430	0.7000	7.95
64	WRLRGNTTS	882	0.7000	7.95
65	LGNTTSLAH	885	0.6800	7.73
66	VGRNVLHAL	105	0.6000	6.82
67	FGLPIVEVI	456	0.6000	6.82
68	IVGVSEDA	824	0.6000	6.82
69	VPRAAVEPL	858	0.6000	6.82
70	FNVPNPVGS	48	0.5800	6.59
71	VAASWPAGV	360	0.5000	5.68
72	YDSDGRPHA	535	0.5000	5.68
73	LDIDTLRAL	812	0.5000	5.68
74	WIFLQIYNA	174	0.4000	4.55
75	YRYTAELAA	24	0.3000	3.41
76	MRITAYADR	277	0.3000	3.41
77	YRRLVNQGY	687	0.3000	3.41
78	IERGDRFVY	715	0.3000	3.41
79	FLAGATPRK	947	0.3000	3.41
80	VAGRLVNLV	959	0.3000	3.41
81	LYDLGHVSS	675	0.2800	3.18
82	VPDDKLFVQ	65	0.2000	2.27
83	IVYDSDGRP	533	0.2000	2.27

84	WVHVLDLGLG	583	0.2000	2.27
85	VHVLDLGLGD	584	0.2000	2.27
86	IEYTNHLTK	844	0.2000	2.27
87	YTNHLTKKH	846	0.0800	0.91
88	VQDMFPYPS	72	-0.1000	0
89	IATDVYARY	93	-0.1000	0

ALLELE: DRB1_0401	Threshold for 3 % with score: 1.48	Highest Score achievable by any peptide: 8.6
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Rank	Sequence	At Position	Score	% of Highest Score
1	WLR LGNTTS	882	4.4000	51.16
2	YRRLVNQGY	687	4.0000	46.51
3	YLVD ETV EY	903	3.8800	45.12
4	YRRAIAAKS	386	3.6000	41.86
5	LRYTDPHNS	615	3.4000	39.53
6	YTNHLTKKH	846	3.2800	38.14
7	FIADYVLAG	425	3.1000	36.05
8	LVDELVAAS	355	2.9000	33.72
9	FAALRNNTA	831	2.7000	31.40
10	WMMRITAYA	275	2.5000	29.07
11	LGNTTSLAH	885	2.4800	28.84
12	LRNNTATAK	834	2.2000	25.58
13	FLQIYNAWF	176	2.1000	24.42
14	YRYTAELAA	24	2.0000	23.26
15	YSRDTNVMP	597	1.8800	21.86
16	VQMLAPLAP	867	1.8000	20.93
17	WARLGTFNV	42	1.7000	19.77
18	LGYIATDVY	90	1.7000	19.77
19	YRADSLVNW	233	1.5800	18.37
20	LHRTIVGVS	820	1.5000	17.44
21	WIFLQIYNA	174	1.4000	16.28
22	VLYDLGHVS	674	1.4000	16.28
23	LRLGNTTSL	883	1.4000	16.28

24	YAINPANGE	412	1.3000	15.12
25	LVQMLAPLA	866	1.3000	15.12
26	MQRNWIGRS	302	1.1000	12.79
27	LNGMSVPAA	486	1.1000	12.79
28	LVDETVVEYP	904	1.1000	12.79
29	VWRLVVDEH	792	1.0800	12.56
30	MVGRNVLHA	104	1.0000	11.63
31	YAYTDARGS	699	1.0000	11.63
32	VVAADTDEE	924	1.0000	11.63
33	YRWTQWIFL	169	0.9800	11.40
34	YLNQGYIQA	485	0.9800	11.40
35	LVNQGVIQA	690	0.9800	11.40
36	VYRADSLVN	232	0.9000	10.47
37	MRITAYADR	277	0.9000	10.47
38	YELRYTDPH	613	0.8800	10.23
39	WFDTTANKA	183	0.8000	9.30
40	YLVLAPEHD	346	0.8000	9.30
41	YTG DGILVN	474	0.8000	9.30
42	FLGSYAINP	408	0.7800	9.07
43	FGLPIVEVI	456	0.7000	8.14
44	VVDEHTGET	796	0.7000	8.14
45	YRLVYRADS	229	0.6000	6.98
46	VNPLWTYGG	368	0.6000	6.98
47	LVNSDYLNG	480	0.6000	6.98
48	VMPQWAGSS	603	0.6000	6.98
49	YTAELAARL	26	0.5000	5.81
50	YIATDVYAR	92	0.5000	5.81
51	VNSDYLNGM	481	0.5000	5.81
52	FNVPNPVGS	48	0.4800	5.58
53	YRFLQRVWR	786	0.4800	5.58
54	VRGRVVVAA	919	0.4800	5.58
55	FVQDMFPYP	71	0.4000	4.65
56	LHLLYSRFW	663	0.4000	4.65
57	VSPDEICDA	747	0.3000	3.49

58	FLAGATPRK	947	0.3000	3.49
59	WRLVVDEHT	793	0.2000	2.33
60	FGATYLVLA	342	0.1800	2.09
61	LANEEVTAD	249	0.1000	1.16
62	LERQESREK	396	0.1000	1.16
63	LAPLAPHIA	870	0.1000	1.16
64	YPVQVNGKV	911	0.1000	1.16
65	VPAEQVIER	709	-0.0200	0
66	FRMVGRNVL	102	-0.1000	0
67	FKLRDWLFA	514	-0.1000	0
68	IFIADYVLA	424	-0.1200	0
69	LVVDEHTGE	795	-0.2000	0
70	WMGPRPAEH	635	-0.2200	0
71	IFLQIYNAW	175	-0.3000	0
72	FARAFGLPI	452	-0.4000	0
73	IVYDSGRP	533	-0.4000	0
74	VHVDLGLGD	584	-0.4000	0
75	IEYTNHLTK	844	-0.4000	0
76	LAPHIAEEL	873	-0.4000	0
77	IGRSTGAVA	307	-0.5000	0
78	VEPLVQMLA	863	-0.5000	0
79	FDTTANKAR	184	-0.6000	0
80	VQDMFPYPS	72	-0.7000	0
81	WIGRSTGAV	306	-0.7000	0
82	YVLAGYGTG	429	-0.7000	0
83	FVYPGPDGE	721	-0.7000	0
84	VELDIDTLR	810	-0.7000	0
85	VPRAAVEPL	858	-0.7000	0
86	YVPAEQVIE	708	-0.7200	0
87	WATKDVVGA	777	-0.7200	0
88	VTESPTAGP	0	-0.8000	0
89	VFTTRPDTL	333	-0.8000	0
90	VDRLESAGR	499	-0.8000	0
91	VAASWPAGV	360	-0.9000	0

ALLELE: DRB1_0402	Threshold for 3 % with score: 1.8	Highest Score achievable by any peptide: 9.6
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Rank	Sequence	At Position	Score	% of Highest Score
1	MVGRNVLHA	104	5.2000	54.17
2	VRGRVVVAA	919	4.5000	46.88
3	WMMRITAYA	275	4.4000	45.83
4	LRYTDPHNS	615	3.7000	38.54
5	LRLGNTTSL	883	3.5000	36.46
6	LRQWMMRIT	272	3.2000	33.33
7	VALFSARAA	314	3.0000	31.25
8	LHLLYSRFW	663	2.9000	30.21
9	IEVFTTRPD	331	2.8000	29.17
10	LERQESREK	396	2.8000	29.17
11	YRRLVNQGY	687	2.7000	28.13
12	YTNHLTKKH	846	2.6800	27.92
13	YRRAIAAKS	386	2.6000	27.08
14	LGNTTSLAH	885	2.5800	26.88
15	VNPLWTYGG	368	2.3000	23.96
16	VYRADSLVN	232	2.2000	22.92
17	WLRLGNTTS	882	2.2000	22.92
18	VQDMFPYPS	72	2.1000	21.88
19	FKLRDWLFA	514	2.1000	21.88
20	LRNNTATAK	834	2.1000	21.88
21	LQIYNAWFD	177	2.0000	20.83
22	VAGRLVNLV	959	2.0000	20.83
23	LRDWLFARQ	516	1.9000	19.79
24	VYARYFRMV	97	1.8000	18.75
25	LVYRADSLV	231	1.7000	17.71
26	YAYTDARGS	699	1.7000	17.71
27	LVQMLAPLA	866	1.7000	17.71
28	VQMLAPLAP	867	1.7000	17.71
29	LNGMSVPAA	486	1.5000	15.62
30	LGHVSSREP	678	1.4000	14.58

31	VFRKRLRQW	267	1.2000	12.50
32	LVNQGYIQA	690	1.2000	12.50
33	LAGATPRKV	948	1.2000	12.50
34	VNFRRQLGR	142	1.1000	11.46
35	FYRWTQWIF	168	1.1000	11.46
36	WIFLQIYNA	174	1.1000	11.46
37	LVNWCPGLG	238	1.1000	11.46
38	MMRITAYAD	276	1.0800	11.25
39	IFIADYVLA	424	1.0000	10.42
40	YLNQMSVPA	485	1.0000	10.42
41	FLQRVWRLV	788	1.0000	10.42
42	YELRYTDPH	613	0.9800	10.21
43	LYSRFWHKV	666	0.9000	9.38
44	VVGAYRFLQ	782	0.9000	9.38
45	WARLGTFFV	42	0.8000	8.33
46	LGSYAINPA	409	0.8000	8.33
47	LLYSRFWHK	665	0.8000	8.33
48	VSSREPYRR	681	0.8000	8.33
49	VIERGDRFV	714	0.8000	8.33
50	FRRQLGRLG	144	0.7000	7.29
51	MRITAYADR	277	0.7000	7.29
52	LPIVEVIAG	458	0.7000	7.29
53	LHVGHPGLY	84	0.6000	6.25
54	YFRMVGRNV	101	0.6000	6.25
55	VVNFRRQLG	141	0.6000	6.25
56	FRKRLRQWM	268	0.5000	5.21
57	VIAGGNISE	463	0.5000	5.21
58	LHRTIVGVS	820	0.5000	5.21
59	YIATDVYAR	92	0.4000	4.17
60	YNAWFDTTA	180	0.4000	4.17
61	WIGRSTGAV	306	0.4000	4.17
62	VIVVAGRLV	956	0.4000	4.17
63	FLQIYNAWF	176	0.3800	3.96
64	FAALRNNTA	831	0.3000	3.12

65	VLHALGFDA	109	0.2000	2.08
66	WTQWIFLQI	171	0.2000	2.08
67	LVLAPEHDL	347	0.2000	2.08
68	WATKDVVGA	777	0.2000	2.08
69	LAPLAPHIA	870	0.2000	2.08
70	VVAADTDEE	924	0.2000	2.08
71	LGYIATDVY	90	0.1800	1.88
72	YRYTAELAA	24	0.1000	1.04
73	LVDELVAAS	355	0.1000	1.04
74	VPGHDQRDW	442	0.1000	1.04
75	LVNSDYLNQ	480	0.1000	1.04
76	VNQGYYQAY	691	0.1000	1.04
77	LIEYTNHLT	843	0.1000	1.04
78	FNVPNPVGS	48	-0.1000	0
79	IMAVPGHDQ	439	-0.1000	0
80	VVVAADTDE	923	-0.1000	0
81	FLAGATPRK	947	-0.1000	0
82	VPRADDADS	11	-0.2000	0
83	YRLVYRADS	229	-0.2000	0
84	LRVYEMSMG	761	-0.2000	0
85	LWLRLGNTT	881	-0.2000	0
86	IVVAGRLVN	957	-0.2000	0
87	VLDWPEQVK	292	-0.3000	0
88	IAGGNISES	464	-0.3000	0
89	IEYTNHLTK	844	-0.3000	0
90	VKTMQRNWI	299	-0.4000	0
91	VMPQWAGSS	603	-0.4000	0
92	MGPRPAEHG	636	-0.4000	0
93	IFLQIYNAW	175	-0.5000	0

ALLELE: DRB1_0404	Threshold for 3 % with score: 1.8	Highest Score achievable by any peptide: 8.8		
Rank	Sequence	At Position	Score	% of Highest Score

1	WLRLGNTTS	882	4.1000	46.59
2	YRRLVNQGY	687	3.0000	34.09
3	LVQMLAPLA	866	2.9000	32.95
4	VNPLWTYGG	368	2.8000	31.82
5	LNGMSVPAA	486	2.7000	30.68
6	YRRAIAAKS	386	2.6000	29.55
7	VQMLAPLAP	867	2.6000	29.55
8	LRYTDPHNS	615	2.4000	27.27
9	VQDMFPYPS	72	2.2000	25.00
10	LGYIATDVY	90	2.1000	23.86
11	LRNNTATAK	834	2.1000	23.86
12	LRLGNTTSL	883	2.1000	23.86
13	FAALRNNTA	831	2.0000	22.73
14	LHLLYSRFW	663	1.9000	21.59
15	WARLGTFFNV	42	1.8500	21.02
16	WIFLQIYNA	174	1.6000	18.18
17	VYRADSLVN	232	1.5000	17.05
18	LPIVEVIAG	458	1.4800	16.82
19	LGNTTSLAH	885	1.4800	16.82
20	FLQIYNAWF	176	1.4000	15.91
21	VWRLVVDEH	792	1.3800	15.68
22	LVDELVAAS	355	1.3000	14.77
23	LVNQGYIQA	690	1.1800	13.41
24	MVGRNVLHA	104	1.1000	12.50
25	VALFSARAA	314	1.1000	12.50
26	VVAADTDEE	924	1.1000	12.50
27	YRLVYRADS	229	1.0000	11.36
28	WMMRITAYA	275	1.0000	11.36
29	MMRITAYAD	276	1.0000	11.36
30	MGPLEASRP	768	1.0000	11.36
31	LHRTIVGVS	820	1.0000	11.36
32	VKTMQRNWI	299	0.9000	10.23
33	IEVFTTRPD	331	0.9000	10.23
34	LGSYAINPA	409	0.9000	10.23

35	VMPQWAGSS	603	0.9000	10.23
36	LAPLAPHIA	870	0.9000	10.23
37	VRGRVVVAA	919	0.8000	9.09
38	IFIADYVLA	424	0.7000	7.95
39	LRVYEMSMG	761	0.7000	7.95
40	MQRNWIGRS	302	0.6000	6.82
41	LERQESREK	396	0.6000	6.82
42	VEPLVQMLA	863	0.6000	6.82
43	LRALHRTIV	817	0.5000	5.68
44	FRMVGRNVL	102	0.4000	4.55
45	VDRLESAGR	499	0.4000	4.55
46	LVNWCPGLG	238	0.3500	3.98
47	VVGAYRFLQ	782	0.3500	3.98
48	MRITAYADR	277	0.3000	3.41
49	LRDWLFARQ	516	0.2500	2.84
50	LAGYGTGAI	431	0.2000	2.27
51	IMAVPGHDQ	439	0.2000	2.27
52	VLHLLYSRF	662	0.2000	2.27
53	YLVDETVEY	903	0.2000	2.27
54	VVVAADTDE	923	0.2000	2.27
55	LGTFNVPNP	45	0.1000	1.14
56	VPIFIADYV	422	0.1000	1.14
57	LQIYNAWFD	177	-0.1000	0
58	VPRADDADS	11	-0.2000	0
59	LYDLGHVSS	675	-0.2000	0
60	VQAFLAGAT	944	-0.2000	0
61	VGSLAPPDG	54	-0.3000	0
62	LVNSDYLNG	480	-0.3000	0
63	IQAYAYTDA	696	-0.3000	0
64	WRLVVDEHT	793	-0.3000	0
65	VLHALGFDA	109	-0.3500	0
66	FNVPNPVG	48	-0.4000	0
67	LQRVWRLVV	789	-0.4000	0
68	MFPYPSGEG	75	-0.5000	0

69	VLYDLGHVS	674	-0.5000	0
70	YRFLQRVWR	786	-0.5000	0
71	VPRAAVEPL	858	-0.6000	0
72	LFSARAASD	316	-0.7000	0
73	LVLAPEHDL	347	-0.7000	0
74	YFRMVGRNV	101	-0.8000	0
75	LVYRADSLV	231	-0.8000	0
76	FIADYVLAG	425	-0.8000	0
77	LKNSVSPDE	743	-0.8000	0
78	VVDEHTGET	796	-0.8000	0
79	IVGVSEDF	824	-0.8000	0
80	LIEYTNHLT	843	-0.8000	0
81	YTNHLTKKH	846	-0.8200	0
82	LFVQDMFPY	70	-0.8500	0
83	VGVSEDFAA	825	-0.8500	0
84	LVAEFESGA	197	-0.9000	0
85	YLVLAPEHD	346	-0.9000	0
86	LVAASWPAG	359	-0.9000	0
87	FGLPIVEVI	456	-0.9000	0
88	VNSDYLNGM	481	-0.9000	0
89	IVVAGRLVN	957	-0.9000	0
90	WMGPRPAEH	635	-0.9200	0
91	YNAWFDTTA	180	-0.9500	0

ALLELE: DRB1_0405	Threshold for 3 % with score: 2.0	Highest Score achievable by any peptide: 9.4
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRRLVNQGY	687	5.1000	54.26
2	WLRLGNTTS	882	5.1000	54.26
3	YRRAIAAKS	386	3.6000	38.30
4	FLQIYNAWF	176	3.3000	35.11
5	WARLGTFFNV	42	3.1500	33.51
6	VNPLWTYGG	368	3.1000	32.98

7	VVAADTDEE	924	3.1000	32.98
8	FAALRNNTA	831	3.0000	31.91
9	YLVLAPEHD	346	2.8000	29.79
10	YAINPANGE	412	2.8000	29.79
11	MMRITAYAD	276	2.7000	28.72
12	WIFLQIYNA	174	2.6000	27.66
13	IEVFTTRPD	331	2.6000	27.66
14	VYRADSLVN	232	2.5000	26.60
15	FRMVGRNVL	102	2.4000	25.53
16	YLVDETVEY	903	2.3000	24.47
17	LGYIATDVY	90	2.2000	23.40
18	VVVAADTDE	923	2.2000	23.40
19	YVPAEQVIE	708	2.1000	22.34
20	LRLGNTTSL	883	2.1000	22.34
21	YRLVYRADS	229	2.0000	21.28
22	LGTVLANEE	245	2.0000	21.28
23	WMMRITAYA	275	2.0000	21.28
24	VQMLAPLAP	867	2.0000	21.28
25	YIQAYAYTD	695	1.9000	20.21
26	LVQMLAPLA	866	1.9000	20.21
27	LHLLYSRFW	663	1.8000	19.15
28	LPIVEVIAG	458	1.7800	18.94
29	LNGMSVPAA	486	1.7000	18.09
30	FVYPGPDGE	721	1.7000	18.09
31	LGNTTSLAH	885	1.7000	18.09
32	LQIYNAWFD	177	1.6000	17.02
33	VWRLVVDEH	792	1.6000	17.02
34	WRLVVDEHT	793	1.6000	17.02
35	FIADYVLAG	425	1.5000	15.96
36	LRYTDPHNS	615	1.4000	14.89
37	YTNHLTKKH	846	1.4000	14.89
38	WMGPRPAEH	635	1.3000	13.83
39	VQDMFPYPS	72	1.2000	12.77
40	FPIVYDSDG	531	1.2000	12.77

41	LKNSVSPDE	743	1.2000	12.77
42	LFSARAASD	316	1.0000	10.64
43	LRVYEMSMG	761	1.0000	10.64
44	FRRQLGRLG	144	0.8000	8.51
45	WVHVLDLDL	583	0.8000	8.51
46	LVVDEHTGE	795	0.8000	8.51
47	LANEEVTAD	249	0.7000	7.45
48	YVLAGYGTG	429	0.7000	7.45
49	YELRYTDPH	613	0.7000	7.45
50	LKAAVLTDE	934	0.7000	7.45
51	LVNWCPGLG	238	0.6500	6.91
52	FNVPNPVGS	48	0.6000	6.38
53	YFRMVGRNV	101	0.5000	5.32
54	YRFLQRVWR	786	0.5000	5.32
55	MGPLEASRP	768	0.4000	4.26
56	LRNNTATAK	834	0.4000	4.26
57	YRWTQWIFL	169	0.3800	4.04
58	VIAGGNISE	463	0.3800	4.04
59	VVNFRRQLG	141	0.3000	3.19
60	LVDELVAAS	355	0.3000	3.19
61	FGLPIVEVI	456	0.3000	3.19
62	LVNQGYIQA	690	0.1800	1.91
63	VVGAYRFLQ	782	0.1500	1.60
64	MVGRNVLHA	104	0.1000	1.06
65	VKTMQRNWI	299	0.1000	1.06
66	VALFSARAA	314	0.1000	1.06
67	VLHLLYSRF	662	0.1000	1.06
68	IVVAGRLVN	957	0.1000	1.06
69	YNAWFDTTA	180	0.0500	0.53
70	LRDWLFARQ	516	0.0500	0.53
71	YIATDVYAR	92	-0.1000	0
72	LGRLGFGHD	148	-0.1000	0
73	IFLQIYNAW	175	-0.1000	0
74	LGSYAINPA	409	-0.1000	0

75	YTGDGILVN	474	-0.1000	0
76	VMPQWAGSS	603	-0.1000	0
77	LAPLAPHIA	870	-0.1000	0
78	MFPYPSGEG	75	-0.2000	0
79	YRADSLVNW	233	-0.2000	0
80	IVEVIAGGN	460	-0.2000	0
81	FARQRYWGE	521	-0.2000	0
82	LRALHRTIV	817	-0.2000	0
83	VRGRVVVAA	919	-0.2000	0
84	IFIADYVLA	424	-0.3000	0
85	YAYTDARGS	699	-0.3000	0
86	YPVQVNGKV	911	-0.3000	0
87	VQAFLAGAT	944	-0.3000	0
88	FLGSYAINP	408	-0.3200	0
89	MQRNWIGRS	302	-0.4000	0

ALLELE: DRB1_0408	Threshold for 3 % with score: 1.2	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	WLR LGNTTS	882	5.1000	57.95
2	YRRLVNQGY	687	4.0000	45.45
3	YRRAIAAKS	386	3.6000	40.91
4	FAALRNNTA	831	3.0000	34.09
5	WARLGT FNV	42	2.8500	32.39
6	WIFLQIYNA	174	2.6000	29.55
7	FLQIYNAWF	176	2.4000	27.27
8	YRLVYRADS	229	2.0000	22.73
9	WMMRITAYA	275	2.0000	22.73
10	LVQMLAPLA	866	1.9000	21.59
11	VNPLW TYGG	368	1.8000	20.45
12	LNGMSVPAA	486	1.7000	19.32
13	VQMLAPLAP	867	1.6000	18.18
14	FRMVGRNVL	102	1.4000	15.91

15	LRYTDPHNS	615	1.4000	15.91
16	VQDMFPYPS	72	1.2000	13.64
17	YLVDETVY	903	1.2000	13.64
18	LGYIATDVY	90	1.1000	12.50
19	LRNNTATAK	834	1.1000	12.50
20	LRLGNTTSL	883	1.1000	12.50
21	LHLLYSRFW	663	0.9000	10.23
22	WRLVVDEHT	793	0.7000	7.95
23	FNVPNPVGS	48	0.6000	6.82
24	VYRADSLVN	232	0.5000	5.68
25	YRFLQRVWR	786	0.5000	5.68
26	LPIVEVIAG	458	0.4800	5.45
27	LGNTTSLAH	885	0.4800	5.45
28	VWRLVVDEH	792	0.3800	4.32
29	LVDELVAAS	355	0.3000	3.41
30	YFRMVGRNV	101	0.2000	2.27
31	FIADYVLAG	425	0.2000	2.27
32	LVNQGVIQA	690	0.1800	2.05
33	YTNHLTKKH	846	0.1800	2.05
34	MVGRNVLHA	104	0.1000	1.14
35	VALFSARAA	314	0.1000	1.14
36	YLVLAPEHD	346	0.1000	1.14
37	FGLPIVEVI	456	0.1000	1.14
38	VVAADTDEE	924	0.1000	1.14
39	WMGPRPAEH	635	0.0800	0.91
40	YNAWFDTTA	180	0.0500	0.57
41	YIATDVYAR	92	-0.1000	0
42	VKTMQRNWI	299	-0.1000	0
43	IEVFTTRPD	331	-0.1000	0
44	LGSYAINPA	409	-0.1000	0
45	FPIVYDSDG	531	-0.1000	0
46	VMPQWAGSS	603	-0.1000	0
47	LAPLAPHIA	870	-0.1000	0
48	YAINPANGE	412	-0.2000	0

49	VRGRVVVAA	919	-0.2000	0
50	IFIADYVLA	424	-0.3000	0
51	YAYTDARGS	699	-0.3000	0
52	LRVYEMSMG	761	-0.3000	0
53	MQRNWIGRS	302	-0.4000	0
54	LERQESREK	396	-0.4000	0
55	VEPLVQMLA	863	-0.4000	0
56	FRRQLGRLG	144	-0.5000	0
57	WVHVDLDLG	583	-0.5000	0
58	LRALHRTIV	817	-0.5000	0
59	YELRYTDPH	613	-0.5200	0
60	YVLAGYGTG	429	-0.6000	0
61	VDRLESAGR	499	-0.6000	0
62	FGKIGKSLK	736	-0.6000	0
63	YPVQVNGKV	911	-0.6000	0
64	YRWTQWIFL	169	-0.6200	0
65	LVNWCPGLG	238	-0.6500	0
66	VVGAYRFLQ	782	-0.6500	0
67	WFDTTANKA	183	-0.7000	0
68	MRITAYADR	277	-0.7000	0
69	WATKDVVGA	777	-0.7000	0
70	FLGSYAINP	408	-0.7200	0
71	LRDWLFARQ	516	-0.7500	0
72	LAGYGTGAI	431	-0.8000	0
73	IMAVPGHDQ	439	-0.8000	0
74	FARAFGLPI	452	-0.8000	0
75	YSRDTNVMP	597	-0.8000	0
76	VLHLLYSRF	662	-0.8000	0
77	YIQAYAYTD	695	-0.8000	0
78	VVVAADTDE	923	-0.8000	0
79	FLAGATPRK	947	-0.8000	0
80	LGTFNVPNP	45	-0.9000	0
81	VPIFIADYV	422	-0.9000	0
82	YVPAEQVIE	708	-0.9000	0

83	VVNFRRQLG	141	-1.0000	0
84	IFLQIYNAW	175	-1.0000	0
85	LGTVLANEE	245	-1.0000	0
86	FKLRDWLFA	514	-1.0000	0
87	LGHVSSREP	678	-1.0000	0
88	LQIYNAWFD	177	-1.1000	0
89	YRADSLVNW	233	-1.1000	0
90	WIGRSTGAV	306	-1.1000	0

Rank	Sequence	At Position	Score	% of Highest Score
ALLELE: DRB1_0410		Threshold for 3 % with score: 2.6	Highest Score achievable by any peptide: 9.4	
1	VNPLWTYGG	368	4.1000	43.62
2	YRRLVNQGY	687	4.1000	43.62
3	WLRLGNTTS	882	4.1000	43.62
4	VVAADTDEE	924	4.1000	43.62
5	MMRITAYAD	276	3.7000	39.36
6	IEVFTTRPD	331	3.6000	38.30
7	VYRADSLVN	232	3.5000	37.23
8	LGYIATDVY	90	3.2000	34.04
9	VVVAADTDE	923	3.2000	34.04
10	LRLGNTTSL	883	3.1000	32.98
11	LGTVLANEE	245	3.0000	31.91
12	VQMLAPLAP	867	3.0000	31.91
13	LVQMLAPLA	866	2.9000	30.85
14	LHLLYSRFW	663	2.8000	29.79
15	LPIVEVIAG	458	2.7800	29.57
16	LNGMSVPAA	486	2.7000	28.72
17	LGNTTSLAH	885	2.7000	28.72
18	LQIYNAWFD	177	2.6000	27.66
19	YRRAIAAKS	386	2.6000	27.66
20	VWRLVVDEH	792	2.6000	27.66
21	LRYTDPHNS	615	2.4000	25.53

22	FLQIYNAWF	176	2.3000	24.47
23	VQDMFPYPS	72	2.2000	23.40
24	LKNSVSPDE	743	2.2000	23.40
25	WARLGTFFNV	42	2.1500	22.87
26	LFSARAASD	316	2.0000	21.28
27	LRVYEMSMG	761	2.0000	21.28
28	FAALRNNTA	831	2.0000	21.28
29	YLVLAPEHD	346	1.8000	19.15
30	YAINPANGE	412	1.8000	19.15
31	LVVDEHTGE	795	1.8000	19.15
32	LANEEVTAD	249	1.7000	18.09
33	LKAAVLTDE	934	1.7000	18.09
34	LVNWCPGLG	238	1.6500	17.55
35	WIFLQIYNA	174	1.6000	17.02
36	FRMVGRNVL	102	1.4000	14.89
37	MGPLEASRP	768	1.4000	14.89
38	LRNNTATAK	834	1.4000	14.89
39	VIAGGNISE	463	1.3800	14.68
40	VVNFRRQLG	141	1.3000	13.83
41	LVDELVAAS	355	1.3000	13.83
42	YLVDETVEY	903	1.3000	13.83
43	LVNQGYIQA	690	1.1800	12.55
44	VVGAYRFLQ	782	1.1500	12.23
45	MVGRNVLHA	104	1.1000	11.70
46	VKTMQRNWI	299	1.1000	11.70
47	VALFSARAA	314	1.1000	11.70
48	VLHLLYSRF	662	1.1000	11.70
49	YVPAEQVIE	708	1.1000	11.70
50	IVVAGRLVN	957	1.1000	11.70
51	LRDWLFARQ	516	1.0500	11.17
52	VGSLAPPDG	54	1.0000	10.64
53	YRLVYRADS	229	1.0000	10.64
54	WMMRITAYA	275	1.0000	10.64
55	IMAVPGHDQ	439	1.0000	10.64

56	LVNSDYLNNG	480	1.0000	10.64
57	LHRTIVGVS	820	1.0000	10.64
58	LGRLGFGHD	148	0.9000	9.57
59	IFLQIYNAW	175	0.9000	9.57
60	LGSYAINPA	409	0.9000	9.57
61	VMPQWAGSS	603	0.9000	9.57
62	YIQAYAYTD	695	0.9000	9.57
63	LAPLAPHIA	870	0.9000	9.57
64	MFPYPSGEG	75	0.8000	8.51
65	IVEVIAGGN	460	0.8000	8.51
66	LRALHRTIV	817	0.8000	8.51
67	VRGRVVVAA	919	0.8000	8.51
68	IFIADYVLA	424	0.7000	7.45
69	FVYPPGDGE	721	0.7000	7.45
70	VQAFLAGAT	944	0.7000	7.45
71	MQRNWIGRS	302	0.6000	6.38
72	WRLVVDEHT	793	0.6000	6.38
73	VEPLVQMLA	863	0.6000	6.38
74	LGTFNVPNP	45	0.5000	5.32
75	FIADYVLAG	425	0.5000	5.32
76	LVAASWPAG	359	0.4000	4.26
77	VPIFIADYV	422	0.4000	4.26
78	LAGYGTGAI	431	0.4000	4.26
79	VDRLESAGR	499	0.4000	4.26
80	VHVDL DLGD	584	0.4000	4.26
81	LGHVSSREP	678	0.4000	4.26
82	YTNHLTKKH	846	0.4000	4.26
83	VPRAAVEPL	858	0.4000	4.26
84	MRITAYADR	277	0.3000	3.19
85	LVLAPEHDL	347	0.3000	3.19
86	WMGPRPAEH	635	0.3000	3.19
87	LFVQDMFPY	70	0.2500	2.66
88	VNSDYLNGM	481	0.2000	2.13
89	FPIVYDSDG	531	0.2000	2.13

90	ISELVAEFE	194	0.1000	1.06
91	ILVNSDYLN	479	0.1000	1.06
92	VVDEHTGET	796	0.1000	1.06
93	LIEYTNHLT	843	0.1000	1.06
94	LERQESREK	396	-0.1000	0

ALLELE: DRB1_0421	Threshold for 3 % with score: 2.3	Highest Score achievable by any peptide: 9
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRRLVNQGY	687	5.3000	58.89
2	YLVDETVEY	903	5.1800	57.56
3	WLRLGNTTS	882	4.8000	53.33
4	FIADYVLAG	425	4.5000	50.00
5	FLQIYNAWF	176	4.0000	44.44
6	YRRAIAAKS	386	4.0000	44.44
7	LRYTDPHNS	615	3.8000	42.22
8	LVDELVAAS	355	3.3000	36.67
9	LGYIATDVY	90	3.0000	33.33
10	YSRDTNVMP	597	2.8800	32.00
11	VQMLAPLAP	867	2.8000	31.11
12	WARLGTFFNV	42	2.7000	30.00
13	YAINPANGE	412	2.7000	30.00
14	FAALRNNTA	831	2.7000	30.00
15	YTNHLTKKH	846	2.7000	30.00
16	WMMRITAYA	275	2.5000	27.78
17	MRITAYADR	277	2.4000	26.67
18	VVAADTDEE	924	2.4000	26.67
19	LRLGNTTSL	883	2.3600	26.22
20	LRNNTATAK	834	2.3000	25.56
21	LVDETVEYP	904	2.1000	23.33
22	YRYTAELAA	24	2.0000	22.22
23	YIATDVYAR	92	2.0000	22.22
24	VNPLWTYGG	368	2.0000	22.22

25	LVNSDYLNNG	480	2.0000	22.22
26	VNSDYLNGM	481	2.0000	22.22
27	YRFLQRVWR	786	1.9800	22.00
28	YRWTQWIFL	169	1.9400	21.56
29	YLVLAPEHD	346	1.9000	21.11
30	LHRTIVGVS	820	1.9000	21.11
31	LGNTTSLAH	885	1.9000	21.11
32	VLYDLGHVS	674	1.8000	20.00
33	FLGSYAINP	408	1.7800	19.78
34	VYRADSLVN	232	1.7000	18.89
35	FGLPIVEVI	456	1.6000	17.78
36	YTGDGILVN	474	1.6000	17.78
37	YRADSLVNW	233	1.5800	17.56
38	MQRNWIGRS	302	1.5000	16.67
39	VPAEQVIER	709	1.4800	16.44
40	YTAELAARL	26	1.4600	16.22
41	FVQDMFPYP	71	1.4000	15.56
42	FRRQLGRLG	144	1.4000	15.56
43	WIFLQIYNA	174	1.4000	15.56
44	YAYTDARGS	699	1.4000	15.56
45	LKNSVSPDE	743	1.4000	15.56
46	VVDEHTGET	796	1.4000	15.56
47	FSTTDVDFY	161	1.3000	14.44
48	LVQMLAPLA	866	1.3000	14.44
49	LANEEVTAD	249	1.2000	13.33
50	LVVDEHTGE	795	1.2000	13.33
51	LNGMSVPAA	486	1.1000	12.22
52	YPVQVNGKV	911	1.1000	12.22
53	MVGRNVLHA	104	1.0000	11.11
54	YRLVYRADS	229	1.0000	11.11
55	VMPQWAGSS	603	1.0000	11.11
56	LTDEKVQAF	939	1.0000	11.11
57	YLNQMSVPA	485	0.9800	10.89
58	LVNQGVIQA	690	0.9800	10.89

59	FDTTANKAR	184	0.9000	10.00
60	WRLVVDEHT	793	0.9000	10.00
61	FNVPNPVGS	48	0.8800	9.78
62	FRMVGRNVL	102	0.8600	9.56
63	WFDTTANKA	183	0.8000	8.89
64	VELDIDTLR	810	0.8000	8.89
65	YVLAGYGTG	429	0.7000	7.78
66	VDRLESAGR	499	0.7000	7.78
67	VHVLDLGD	584	0.7000	7.78
68	FVYPPDGE	721	0.7000	7.78
69	YVPAEQVIE	708	0.6800	7.56
70	IVYDSGRP	533	0.6000	6.67
71	LAPHIAEEL	873	0.5600	6.22
72	FARAFGLPI	452	0.5000	5.56
73	VWRLVVDEH	792	0.5000	5.56
74	LPIVEVIAG	458	0.4800	5.33
75	VRGRVVVAA	919	0.4800	5.33
76	WVHVLDLGD	583	0.4000	4.44
77	LHLLYSRFW	663	0.4000	4.44
78	FLAGATPRK	947	0.4000	4.44
79	WIGRSTGAV	306	0.3000	3.33
80	YELRYTDPH	613	0.3000	3.33
81	VSPDEICDA	747	0.3000	3.33
82	VPRAAVEPL	858	0.2600	2.89
83	VTESPTAGP	0	0.2000	2.22
84	VGSLAPPDG	54	0.2000	2.22
85	LERQESREK	396	0.2000	2.22
86	VLFDPPDAD	562	0.2000	2.22
87	VLHLLYSRF	662	0.2000	2.22
88	FGATYLVLA	342	0.1800	2.00
89	VFTTRPDTL	333	0.1600	1.78
90	WQENWARLG	38	0.1000	1.11
91	LHALGFDAF	110	0.1000	1.11
92	VAASWPAGV	360	0.1000	1.11

93	YWGEPPFIV	526	0.1000	1.11
94	FCAKENEAY	626	0.1000	1.11
95	MGGLEASRP	768	0.1000	1.11
96	LAPLAPHIA	870	0.1000	1.11

ALLELE: DRB1_0423	Threshold for 3 % with score: 1.68	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	WLR LGNTTS	882	4.1000	46.59
2	YRRLVNQGY	687	3.0000	34.09
3	LVQMLAPLA	866	2.9000	32.95
4	VNPLWTYGG	368	2.8000	31.82
5	LNGMSVPAA	486	2.7000	30.68
6	YRRAIAAKS	386	2.6000	29.55
7	VQMLAPLAP	867	2.6000	29.55
8	LRYTDPHNS	615	2.4000	27.27
9	VQDMFPYPS	72	2.2000	25.00
10	LGYIATDVY	90	2.1000	23.86
11	LRNNTATAK	834	2.1000	23.86
12	LRLGNTTSL	883	2.1000	23.86
13	FAALRNNTA	831	2.0000	22.73
14	LHLLYSRFW	663	1.9000	21.59
15	WARLGTENV	42	1.8500	21.02
16	WIFLQIYNA	174	1.6000	18.18
17	VYRADSLVN	232	1.5000	17.05
18	LPIVEVIAG	458	1.4800	16.82
19	LGNTTSLAH	885	1.4800	16.82
20	FLQIYNAWF	176	1.4000	15.91
21	VWRLVVDEH	792	1.3800	15.68
22	LVDELVAAS	355	1.3000	14.77
23	LVNQGVIQA	690	1.1800	13.41
24	MVGRNVLHA	104	1.1000	12.50
25	VALFSARAA	314	1.1000	12.50

26	VVAADTDEE	924	1.1000	12.50
27	YRLVYRADS	229	1.0000	11.36
28	WMMRITAYA	275	1.0000	11.36
29	MMRITAYAD	276	1.0000	11.36
30	MGPLEASRP	768	1.0000	11.36
31	LHRTIVGVS	820	1.0000	11.36
32	VKTMQRNWI	299	0.9000	10.23
33	IEVFTTRPD	331	0.9000	10.23
34	LGSYAINPA	409	0.9000	10.23
35	VMPQWAGSS	603	0.9000	10.23
36	LAPLAPHIA	870	0.9000	10.23
37	VRGRVVVAA	919	0.8000	9.09
38	IFIADYVLA	424	0.7000	7.95
39	LRVYEMSMG	761	0.7000	7.95
40	MQRNWIGRS	302	0.6000	6.82
41	LERQESREK	396	0.6000	6.82
42	VEPLVQMLA	863	0.6000	6.82
43	LRALHRTIV	817	0.5000	5.68
44	FRMVGRNVL	102	0.4000	4.55
45	VDRLESAGR	499	0.4000	4.55
46	LVNWCPGLG	238	0.3500	3.98
47	VVGAYRFLQ	782	0.3500	3.98
48	MRITAYADR	277	0.3000	3.41
49	LRDWLFARQ	516	0.2500	2.84
50	LAGYGTGAI	431	0.2000	2.27
51	IMAVPGHDQ	439	0.2000	2.27
52	VLHLLYSRF	662	0.2000	2.27
53	YLVDETVEY	903	0.2000	2.27
54	VVVAADTDE	923	0.2000	2.27
55	LGTFNVPNP	45	0.1000	1.14
56	VPIFIADYV	422	0.1000	1.14
57	LQIYNAWFD	177	-0.1000	0
58	VPRADDADS	11	-0.2000	0
59	LYDLGHVSS	675	-0.2000	0

60	VQAFLAGAT	944	-0.2000	0
61	VGSLAPPDG	54	-0.3000	0
62	LVNSDYLNQ	480	-0.3000	0
63	IQAYAYTDA	696	-0.3000	0
64	WRLVVDEHT	793	-0.3000	0
65	VLHALGFDA	109	-0.3500	0
66	FNVPNPVGS	48	-0.4000	0
67	LQRVWRLVV	789	-0.4000	0
68	MFPYPSGEG	75	-0.5000	0
69	VLYDLGHVS	674	-0.5000	0
70	YRFLQRVWR	786	-0.5000	0
71	VPRAAVEPL	858	-0.6000	0
72	LFSARAASD	316	-0.7000	0
73	LVLAPEHDL	347	-0.7000	0
74	YFRMVGRNV	101	-0.8000	0
75	LVYRADSLV	231	-0.8000	0
76	FIADYVLAG	425	-0.8000	0
77	LKNSVSPDE	743	-0.8000	0
78	VVDEHTGET	796	-0.8000	0
79	IVGVSEDFEA	824	-0.8000	0
80	LIEYTNHLT	843	-0.8000	0
81	YTNHLTKKH	846	-0.8200	0
82	LFVQDMFPY	70	-0.8500	0
83	VGVSEDFEA	825	-0.8500	0
84	LVAEFESGA	197	-0.9000	0
85	YLVLAPEHD	346	-0.9000	0
86	LVAASWPAG	359	-0.9000	0
87	FGLPIVEVI	456	-0.9000	0
88	VNSDYLNQGM	481	-0.9000	0
89	IVVAGRLVN	957	-0.9000	0
90	WMGPRPAEH	635	-0.9200	0
91	YNAWFDTTA	180	-0.9500	0

ALLELE: DRB1_0426	Threshold for 3 % with score: 1.6	Highest Score achievable by any peptide: 8.6
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Rank	Sequence	At Position	Score	% of Highest Score
1	WLRLGNTTS	882	4.4000	51.16
2	YRRLVNQGY	687	4.0000	46.51
3	YLVDETVEY	903	3.8800	45.12
4	YRRAIAAKS	386	3.6000	41.86
5	LRYTDPHNS	615	3.4000	39.53
6	YTNHLTKKH	846	3.2800	38.14
7	FIADYVLAG	425	3.1000	36.05
8	LVDELVAAS	355	2.9000	33.72
9	FAALRNNTA	831	2.7000	31.40
10	WMMRITAYA	275	2.5000	29.07
11	LGNTTSLAH	885	2.4800	28.84
12	LRNNTATAK	834	2.2000	25.58
13	FLQIYNAWF	176	2.1000	24.42
14	YRYTAELAA	24	2.0000	23.26
15	YSRDTNVMP	597	1.8800	21.86
16	VQMLAPLAP	867	1.8000	20.93
17	WARLGTENV	42	1.7000	19.77
18	LGYIATDVY	90	1.7000	19.77
19	YRADSLVNW	233	1.5800	18.37
20	LHRTIVGVS	820	1.5000	17.44
21	WIFLQIYNA	174	1.4000	16.28
22	VLYDLGHVS	674	1.4000	16.28
23	LRLGNTTSL	883	1.4000	16.28
24	YAINPANGE	412	1.3000	15.12
25	LVQMLAPLA	866	1.3000	15.12
26	MQRNWIGRS	302	1.1000	12.79
27	LNGMSVPAA	486	1.1000	12.79
28	LVDETVEYP	904	1.1000	12.79
29	VWRLVVDEH	792	1.0800	12.56
30	MVGRNVLHA	104	1.0000	11.63
31	YAYTDARGS	699	1.0000	11.63

32	VVAADTDEE	924	1.0000	11.63
33	YRWTQWIFL	169	0.9800	11.40
34	YLNQMSVPA	485	0.9800	11.40
35	LVNQGVIQA	690	0.9800	11.40
36	VYRADSLVN	232	0.9000	10.47
37	MRITAYADR	277	0.9000	10.47
38	YELRYTDPH	613	0.8800	10.23
39	WFDTTANKA	183	0.8000	9.30
40	YLVLAPEHD	346	0.8000	9.30
41	YTG DGILVN	474	0.8000	9.30
42	FLGSYAINP	408	0.7800	9.07
43	FGLPIVEVI	456	0.7000	8.14
44	VVDEHTGET	796	0.7000	8.14
45	YRLVYRADS	229	0.6000	6.98
46	VNPLWTYGG	368	0.6000	6.98
47	LVNSDY LNG	480	0.6000	6.98
48	VMPQWAGSS	603	0.6000	6.98
49	YTAELAARL	26	0.5000	5.81
50	YIATDVYAR	92	0.5000	5.81
51	VNSDY LN GM	481	0.5000	5.81
52	FNVPNPVGS	48	0.4800	5.58
53	YRFLQRVWR	786	0.4800	5.58
54	VRGRVVVAA	919	0.4800	5.58
55	FVQDMFPYP	71	0.4000	4.65
56	LHLLYSRFW	663	0.4000	4.65
57	VSPDEICDA	747	0.3000	3.49
58	FLAGATPRK	947	0.3000	3.49
59	WRLVVDEHT	793	0.2000	2.33
60	FGATYLVLA	342	0.1800	2.09
61	LANEEVTAD	249	0.1000	1.16
62	LERQESREK	396	0.1000	1.16
63	LAPLAPHIA	870	0.1000	1.16
64	YPVQVNGKV	911	0.1000	1.16
65	VPAEQVIER	709	-0.0200	0

66	FRMVGRNVL	102	-0.1000	0
67	FKLRDWLFA	514	-0.1000	0
68	IFIADYVLA	424	-0.1200	0
69	LVVDEHTGE	795	-0.2000	0
70	WMGPRPAEH	635	-0.2200	0
71	IFLQIYNAW	175	-0.3000	0
72	FARAFGLPI	452	-0.4000	0
73	IVYDSDGRP	533	-0.4000	0
74	VHVDLGLGD	584	-0.4000	0
75	IEYTNHLTK	844	-0.4000	0
76	LAPHIAEEL	873	-0.4000	0
77	IGRSTGAVA	307	-0.5000	0
78	VEPLVQMLA	863	-0.5000	0
79	FDTTANKAR	184	-0.6000	0
80	VQDMFPYPS	72	-0.7000	0
81	WIGRSTGAV	306	-0.7000	0
82	YVLAGYGTG	429	-0.7000	0
83	FVYPGPDGE	721	-0.7000	0
84	VELDIDTLR	810	-0.7000	0
85	VPRAAVEPL	858	-0.7000	0
86	YVPAEQVIE	708	-0.7200	0
87	WATKDVVGA	777	-0.7200	0
88	VTESPTAGP	0	-0.8000	0
89	VFTTRPDTL	333	-0.8000	0
90	VDRLESAGR	499	-0.8000	0
91	VAASWPAGV	360	-0.9000	0

ALLELE: DRB1_0701	Threshold for 3 % with score: 4.1	Highest Score achievable by any peptide: 11.6		
Rank	Sequence	At Position	Score	% of Highest Score
1	YRWTQWIFL	169	8.5000	73.28
2	FRMVGRNVL	102	8.2000	70.69
3	WAGSSWYEL	607	5.9000	50.86

4	FARAFGLPI	452	5.7000	49.14
5	LRLGNTTSL	883	5.3200	45.86
6	WDFARAFGL	450	5.0000	43.10
7	LQRVWRLVV	789	4.9000	42.24
8	FGLPIVEVI	456	4.7000	40.52
9	LFGATYLVL	341	4.6000	39.66
10	FLGSYAINP	408	4.5000	38.79
11	YRYTAELAA	24	4.1000	35.34
12	VVAGRLVNL	958	4.1000	35.34
13	LGNTTSLAH	885	4.0000	34.48
14	WARLGTFNV	42	3.9200	33.79
15	LVLAPEHDL	347	3.9000	33.62
16	WTQWIFLQI	171	3.7000	31.90
17	LVNSDYLVG	480	3.7000	31.90
18	YSRFWHKVL	667	3.7000	31.90
19	YRRLVNQGY	687	3.7000	31.90
20	LAPHIAEEL	873	3.7000	31.90
21	FLQIYNAWF	176	3.6000	31.03
22	VPRAAVEPL	858	3.6000	31.03
23	VIVVAGRLV	956	3.6000	31.03
24	YIATDVYAR	92	3.5000	30.17
25	VEVIAGGNI	461	3.5000	30.17
26	LRYTDPHNS	615	3.5000	30.17
27	VKTMQRNWI	299	3.4000	29.31
28	IGKSLKNSV	739	3.3000	28.45
29	YFRMVGRNV	101	3.2000	27.59
30	FRKRLRQWM	268	3.1000	26.72
31	FWHKVLYDL	670	3.0000	25.86
32	FYRWTQWIF	168	2.9000	25.00
33	VYRADSLVN	232	2.9000	25.00
34	WCPGLGTVL	241	2.9000	25.00
35	WRLVVDEHT	793	2.9000	25.00
36	FPKADAAYL	896	2.9000	25.00
37	FPYPSGEGE	76	2.8000	24.14

38	VFTTRPDTL	333	2.8000	24.14
39	LPIVEVIAG	458	2.8000	24.14
40	YRLVYRADS	229	2.7000	23.28
41	YGTGAIMAV	434	2.7000	23.28
42	FGATYLVLA	342	2.6000	22.41
43	YRRAIAAKS	386	2.6000	22.41
44	YLNGMSVPA	485	2.6000	22.41
45	YAYTDARGS	699	2.6000	22.41
46	YVPAEQVIE	708	2.6000	22.41
47	YLVDETVEY	903	2.5200	21.72
48	MVGRNVLHA	104	2.5000	21.55
49	VGRNVLHAL	105	2.5000	21.55
50	MMRITAYAD	276	2.4000	20.69
51	INPANGEPV	414	2.4000	20.69
52	WIFLQIYNA	174	2.3000	19.83
53	WFDTTANKA	183	2.3000	19.83
54	MRITAYADR	277	2.3000	19.83
55	FKLRDWLFA	514	2.3000	19.83
56	VGGAEHAVL	655	2.3000	19.83
57	YPSGEGLHV	78	2.2000	18.97
58	WLFARQRYW	519	2.2000	18.97
59	LKNSVSPDE	743	2.2000	18.97
60	LRALHRTIV	817	2.2000	18.97
61	IVVAGRLVN	957	2.2000	18.97
62	WIGRSTGAV	306	2.1200	18.28
63	YRADSLVNW	233	2.1000	18.10
64	LHLLYSRFW	663	2.1000	18.10
65	YTAELAARL	26	2.0000	17.24
66	LHVGHPGLGY	84	2.0000	17.24
67	VAASWPAGV	360	2.0000	17.24
68	MLAPLAPHI	869	2.0000	17.24
69	VRGRVVVAA	919	2.0000	17.24
70	IFIADYVLA	424	1.9000	16.38
71	YEMSMGPLE	764	1.9000	16.38

72	LEASRPWAT	771	1.9000	16.38
73	YRFLQRVWR	786	1.9000	16.38
74	VQMLAPLAP	867	1.9000	16.38
75	LERTWQENW	34	1.8000	15.52
76	VNWCPLGT	239	1.8000	15.52
77	LLYSRFWVK	665	1.8000	15.52
78	VLHALGFDA	109	1.7000	14.66
79	FLQRVWRLV	788	1.7000	14.66
80	LHRTIVGVS	820	1.7000	14.66
81	LAGYGTGAI	431	1.6200	13.97
82	YVGGAEHAV	654	1.6000	13.79
83	YIQAYAYTD	695	1.6000	13.79
84	IEYTNHLTK	844	1.6000	13.79
85	VAGRLVNLV	959	1.6000	13.79
86	LGTVLANEE	245	1.5000	12.93
87	YAINPANGE	412	1.5000	12.93
88	YVLAGYGTG	429	1.5000	12.93
89	LVNQGYIQA	690	1.5000	12.93
90	VVGAYRFLQ	782	1.4000	12.07
91	LAGATPRKV	948	1.4000	12.07
92	WMMRITAYA	275	1.3200	11.38
93	LGHVSSREP	678	1.3000	11.21
94	LFVQDMFPY	70	1.2000	10.34
95	VVNFRRQLG	141	1.2000	10.34
96	FIADYVLAG	425	1.2000	10.34

ALLELE: DRB1_0703	Threshold for 3 % with score: 4.0	Highest Score achievable by any peptide: 11.6		
Rank	Sequence	At Position	Score	% of Highest Score
1	YRWTQWIFL	169	8.5000	73.28
2	FRMVGRNVL	102	8.2000	70.69
3	WAGSSWYEL	607	5.9000	50.86
4	FARAFGLPI	452	5.7000	49.14

5	LRLGNTTSL	883	5.3200	45.86
6	WDFARAFGL	450	5.0000	43.10
7	LQRVWRLVV	789	4.9000	42.24
8	FGLPIVEVI	456	4.7000	40.52
9	LFGATYLVL	341	4.6000	39.66
10	FLGSYAINP	408	4.5000	38.79
11	YRYTAELAA	24	4.1000	35.34
12	VVAGRLVNL	958	4.1000	35.34
13	LGNTTSLAH	885	4.0000	34.48
14	WARLGTFFNV	42	3.9200	33.79
15	LVLAPEHDL	347	3.9000	33.62
16	WTQWIFLQI	171	3.7000	31.90
17	LVNSDYLVNG	480	3.7000	31.90
18	YSRFWHKVL	667	3.7000	31.90
19	YRRLVNQGY	687	3.7000	31.90
20	LAPHIAEEL	873	3.7000	31.90
21	FLQIYNAWF	176	3.6000	31.03
22	VPRAAVEPL	858	3.6000	31.03
23	VIVVAGRLV	956	3.6000	31.03
24	YIATDVYAR	92	3.5000	30.17
25	VEVIAGGNI	461	3.5000	30.17
26	LRYTDPHNS	615	3.5000	30.17
27	VKTMQRNWI	299	3.4000	29.31
28	IGKSLKNSV	739	3.3000	28.45
29	YFRMVGRNV	101	3.2000	27.59
30	FRKRLRQWM	268	3.1000	26.72
31	FWHKVLYDL	670	3.0000	25.86
32	FYRWTQWIF	168	2.9000	25.00
33	VYRADSLVN	232	2.9000	25.00
34	WCPGLGTVL	241	2.9000	25.00
35	WRLVVDEHT	793	2.9000	25.00
36	FPKADAAYL	896	2.9000	25.00
37	FPYPSGEGEGL	76	2.8000	24.14
38	VFTTRPDTL	333	2.8000	24.14

39	LPIVEVIAG	458	2.8000	24.14
40	YRLVYRADS	229	2.7000	23.28
41	YGTGAIMAV	434	2.7000	23.28
42	FGATYLVLA	342	2.6000	22.41
43	YRRAIAAKS	386	2.6000	22.41
44	YLANGMSVPA	485	2.6000	22.41
45	YAYTDARGS	699	2.6000	22.41
46	YVPAEQVIE	708	2.6000	22.41
47	YLVDETV EY	903	2.5200	21.72
48	MVGRNVLHA	104	2.5000	21.55
49	VGRNVLHAL	105	2.5000	21.55
50	MMRITAYAD	276	2.4000	20.69
51	INPANGEPV	414	2.4000	20.69
52	WIFLQIYNA	174	2.3000	19.83
53	WFDTTANKA	183	2.3000	19.83
54	MRITAYADR	277	2.3000	19.83
55	FKLRDWLFA	514	2.3000	19.83
56	VGGAEHAVL	655	2.3000	19.83
57	YPSGEGLHV	78	2.2000	18.97
58	WLFARQRYW	519	2.2000	18.97
59	LKNSVSPDE	743	2.2000	18.97
60	LRALHRTIV	817	2.2000	18.97
61	IVVAGRLVN	957	2.2000	18.97
62	WIGRSTGAV	306	2.1200	18.28
63	YRADSLVNW	233	2.1000	18.10
64	LHLLYSRFW	663	2.1000	18.10
65	YTAELAARL	26	2.0000	17.24
66	LHVGHP LGY	84	2.0000	17.24
67	VAASWPAGV	360	2.0000	17.24
68	MLAPLAPHI	869	2.0000	17.24
69	VRGRVVVAA	919	2.0000	17.24
70	IFIADYVLA	424	1.9000	16.38
71	YEMSMGPLE	764	1.9000	16.38
72	LEASRPWAT	771	1.9000	16.38

73	YRFLQRVWR	786	1.9000	16.38
74	VQMLAPLAP	867	1.9000	16.38
75	LERTWQENW	34	1.8000	15.52
76	VNWCPLGT	239	1.8000	15.52
77	LLYSRFWHK	665	1.8000	15.52
78	VLHALGFDA	109	1.7000	14.66
79	FLQRVWRLV	788	1.7000	14.66
80	LHRTIVGVS	820	1.7000	14.66
81	LAGYGTGAI	431	1.6200	13.97
82	YVGGAEHAV	654	1.6000	13.79
83	YIQAYAYTD	695	1.6000	13.79
84	IEYTNHLTK	844	1.6000	13.79
85	VAGRLVNLV	959	1.6000	13.79
86	LGTVLANEE	245	1.5000	12.93
87	YAINPANGE	412	1.5000	12.93
88	YVLAGYGTG	429	1.5000	12.93
89	LVNQGYIQA	690	1.5000	12.93
90	VVGAYRFLQ	782	1.4000	12.07
91	LAGATPRKV	948	1.4000	12.07
92	WMMRITAYA	275	1.3200	11.38
93	LGHVSSREP	678	1.3000	11.21
94	LFVQDMFPY	70	1.2000	10.34
95	VVNFRRQLG	141	1.2000	10.34
96	FIADYVLAG	425	1.2000	10.34

ALLELE: DRB1_0801	Threshold for 3 % with score: 1.8	Highest Score achievable by any peptide: 8.6
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Rank	Sequence	At Position	Score	% of Highest Score
1	WMMRITAYA	275	5.6000	65.12
2	YRLVYRADS	229	5.2000	60.47
3	FRKRLRQWM	268	5.0000	58.14
4	MVGRNVLHA	104	4.5000	52.33
5	YARYFRMVG	98	3.9000	45.35

6	VRGRVVVAA	919	3.8000	44.19
7	LQIYNAWFD	177	3.7000	43.02
8	FRMVGRNVL	102	3.6000	41.86
9	YRRAIAAKS	386	3.6000	41.86
10	WIGRSTGAV	306	3.5000	40.70
11	YELRYTDPH	613	3.1000	36.05
12	IVVAGRLVN	957	2.9000	33.72
13	FKLRDWLFA	514	2.7000	31.40
14	VVGAYRFLQ	782	2.7000	31.40
15	YRFLQRVWR	786	2.6000	30.23
16	WATKDVVGA	777	2.4000	27.91
17	VNGKVRGRV	915	2.4000	27.91
18	VFRKRLRQW	267	2.3000	26.74
19	LFARQRYWG	520	2.3000	26.74
20	YVPAEQVIE	708	2.3000	26.74
21	VVNFRRQLG	141	2.2000	25.58
22	WIFLQIYNA	174	2.2000	25.58
23	IAAYRRAIA	383	2.2000	25.58
24	WMGPRPAEH	635	2.1000	24.42
25	MFPYPSGEG	75	2.0000	23.26
26	LRVYEMSMG	761	2.0000	23.26
27	LVNWCPGLG	238	1.9000	22.09
28	YRRLVNQGY	687	1.9000	22.09
29	MQRNWIGRS	302	1.8000	20.93
30	LKPYSRDTN	594	1.8000	20.93
31	FSARAASDD	317	1.7000	19.77
32	LAGYGTGAI	431	1.6000	18.60
33	VQMLAPLAP	867	1.6000	18.60
34	YAINPANGE	412	1.5000	17.44
35	YVLAGYGTG	429	1.5000	17.44
36	FWHKVLYDL	670	1.5000	17.44
37	LQRVWRLVV	789	1.5000	17.44
38	LNGMSVPAA	486	1.4000	16.28
39	YWMGPRPAE	634	1.4000	16.28

40	VNFRRQLGR	142	1.3000	15.12
41	FESGARCLD	201	1.3000	15.12
42	IEVFTTRPD	331	1.3000	15.12
43	YLVLAPEHD	346	1.3000	15.12
44	LGSYAINPA	409	1.3000	15.12
45	FIADYVLAG	425	1.3000	15.12
46	LRYTDPHNS	615	1.3000	15.12
47	FVYPPGDGE	721	1.3000	15.12
48	LVQMLAPLA	866	1.3000	15.12
49	YFRMVGRNV	101	1.2000	13.95
50	VQVNGKVRG	913	1.2000	13.95
51	VKTMQRNWI	299	1.1000	12.79
52	MMRITAYAD	276	1.0000	11.63
53	LFSARAASD	316	1.0000	11.63
54	LPIVEVIAG	458	1.0000	11.63
55	VDLYVGGAE	651	1.0000	11.63
56	YIQAYAYTD	695	1.0000	11.63
57	VAGRLVNLV	959	1.0000	11.63
58	WARLGTFNV	42	0.9000	10.47
59	FRRQLGRLG	144	0.9000	10.47
60	FLQRVWRLV	788	0.9000	10.47
61	LHRTIVGVS	820	0.9000	10.47
62	VYRADSLVN	232	0.8000	9.30
63	VNPLWTYGG	368	0.8000	9.30
64	IEFKLRDWL	512	0.8000	9.30
65	WLFARQRYW	519	0.8000	9.30
66	YTNHLTKKH	846	0.8000	9.30
67	VVAADTDEE	924	0.8000	9.30
68	LVDELVAAS	355	0.7000	8.14
69	WVHVDLDLG	583	0.7000	8.14
70	LHLLYSRFW	663	0.7000	8.14
71	FLQIYNAWF	176	0.6000	6.98
72	FNVPNPVGS	48	0.4000	4.65
73	VQDMFPYPS	72	0.4000	4.65

74	VWRLVVDEH	792	0.4000	4.65
75	YRYTAEALAA	24	0.3000	3.49
76	IVEVIAGGN	460	0.3000	3.49
77	YLVDETVEY	903	0.3000	3.49
78	YRADSLVNW	233	0.2000	2.33
79	FPVFRKRLR	265	0.2000	2.33
80	IADYVLAGY	426	0.2000	2.33
81	YTGDGILVN	474	0.2000	2.33
82	LVYRADSLV	231	0.1000	1.16
83	IMAVPGHDQ	439	0.1000	1.16
84	LRALHRTIV	817	0.1000	1.16
85	WLRLGNTTS	882	0.1000	1.16
86	VALFSARAA	314	-0.1000	0
87	YAYTDARGS	699	-0.1000	0
88	YEMSMGPLE	764	-0.1000	0

ALLELE: DRB1_0802	Threshold for 3 % with score: 1.0	Highest Score achievable by any peptide: 8
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Rank	Sequence	At Position	Score	% of Highest Score
1	WMMRITAYA	275	5.6000	70.00
2	YRLVYRADS	229	5.2000	65.00
3	MVGRNVLHA	104	4.5000	56.25
4	FRKRLRQWM	268	3.9000	48.75
5	VRGRVVVAA	919	3.8000	47.50
6	YRRAIAAKS	386	3.6000	45.00
7	WIGRSTGAV	306	3.2000	40.00
8	FKLRDWLFA	514	2.7000	33.75
9	YARYFRMVG	98	2.6000	32.50
10	FRMVGRNVL	102	2.6000	32.50
11	YRFLQRVWR	786	2.6000	32.50
12	WATKDVVGA	777	2.4000	30.00
13	WIFLQIYNA	174	2.2000	27.50
14	IAAYRRAIA	383	2.2000	27.50

15	VNGKVRGRV	915	2.1000	26.25
16	VVGAYRFLQ	782	1.9000	23.75
17	YELRYTDPH	613	1.8800	23.50
18	MQRNWIGRS	302	1.8000	22.50
19	VFRKRLRQW	267	1.4000	17.50
20	LAGYGTGAI	431	1.4000	17.50
21	LNGMSVPAA	486	1.4000	17.50
22	VNFRRQLGR	142	1.3000	16.25
23	LGSYAINPA	409	1.3000	16.25
24	LRYTDPHNS	615	1.3000	16.25
25	LVQMLAPLA	866	1.3000	16.25
26	LQRVWRLVV	789	1.2000	15.00
27	VQMLAPLAP	867	1.2000	15.00
28	LQIYNAWFD	177	1.0000	12.50
29	LFARQRYWG	520	1.0000	12.50
30	YFRMVGRNV	101	0.9000	11.25
31	VVNFRRQLG	141	0.9000	11.25
32	VKTMQRNWI	299	0.9000	11.25
33	LHRTIVGVS	820	0.9000	11.25
34	IVVAGRLVN	957	0.9000	11.25
35	WMGPRPAEH	635	0.8800	11.00
36	YRRLVNQGY	687	0.8000	10.00
37	MFPYPSGEG	75	0.7000	8.75
38	LVDELVAAS	355	0.7000	8.75
39	FQEFGKIGK	733	0.7000	8.75
40	LRVYEMSMG	761	0.7000	8.75
41	VAGRLVNLV	959	0.7000	8.75
42	WARLGTFFNV	42	0.6000	7.50
43	LVNWCPGLG	238	0.6000	7.50
44	FLQRVWRLV	788	0.6000	7.50
45	FWHKVLYDL	670	0.5000	6.25
46	FGKIGKSLK	736	0.5000	6.25
47	FNVPNPVGS	48	0.4000	5.00
48	VQDMFPYPS	72	0.4000	5.00

49	YRYTAELAA	24	0.3000	3.75
50	FPVFRKRLR	265	0.2000	2.50
51	YVLAGYGTG	429	0.2000	2.50
52	WLRLGNTTS	882	0.1000	1.25
53	VALFSARAA	314	-0.1000	0
54	WLFARQRYW	519	-0.1000	0
55	YAYTDARGS	699	-0.1000	0
56	VQVNGKVRG	913	-0.1000	0
57	LVYRADSLV	231	-0.2000	0
58	LESAGRGRA	502	-0.2000	0
59	IEFKLRDWL	512	-0.2000	0
60	LKPYSRDTN	594	-0.2000	0
61	LHLLYSRFW	663	-0.2000	0
62	LRALHRTIV	817	-0.2000	0
63	FLQIYNAWF	176	-0.3000	0
64	YGGGTPGEA	374	-0.3000	0
65	LPIVEVIAG	458	-0.3000	0
66	FRRQLGRLG	144	-0.4000	0
67	VMPQWAGSS	603	-0.4000	0
68	VSSREPYRR	681	-0.4000	0
69	LAPLAPHIA	870	-0.4000	0
70	YTNHLTKKH	846	-0.4200	0
71	VYARYFRMV	97	-0.5000	0
72	VNPLWTYGG	368	-0.5000	0
73	VEPLVQMLA	863	-0.5000	0
74	FARAFGLPI	452	-0.6000	0
75	WVHVDLDLG	583	-0.6000	0
76	LYSRFWHKV	666	-0.6000	0
77	YRADSLVNW	233	-0.7000	0
78	MRITAYADR	277	-0.7000	0
79	IMAVPGHDQ	439	-0.7000	0
80	YLANGMSVPA	485	-0.7000	0
81	YVPAEQVIE	708	-0.7000	0
82	FLAGATPRK	947	-0.7000	0

83	YIATDVYAR	92	-0.8000	0
84	WAKLTAGER	214	-0.8000	0
85	YGTGAIMAV	434	-0.8000	0
86	LTKKHRDAV	850	-0.8000	0
87	YLVDETVEY	903	-0.8000	0
88	VLTDEKVQA	938	-0.8000	0
89	VWRLVVDEH	792	-0.8200	0
90	FGHDSRRSF	153	-0.9000	0
91	FYRWTQWIF	168	-0.9000	0
92	IADYVLAGY	426	-0.9000	0
93	FSARAASDD	317	-1.0000	0
94	FGLPIVEVI	456	-1.0000	0

ALLELE: DRB1_0804	Threshold for 3 % with score: 1.6	Highest Score achievable by any peptide: 8
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Rank	Sequence	At Position	Score	% of Highest Score
1	MVGRNVLHA	104	5.5000	68.75
2	VRGRVVVAA	919	4.8000	60.00
3	WMMRITAYA	275	4.6000	57.50
4	YRLVYRADS	229	4.2000	52.50
5	IAAYRRAIA	383	3.2000	40.00
6	VNGKVRGRV	915	3.1000	38.75
7	FRKRLRQWM	268	2.9000	36.25
8	VVGAYRFLQ	782	2.9000	36.25
9	MQRNWIGRS	302	2.8000	35.00
10	YRRAIAAKS	386	2.6000	32.50
11	VFRKRLRQW	267	2.4000	30.00
12	LAGYGTGAI	431	2.4000	30.00
13	LNGMSVPAA	486	2.4000	30.00
14	VNFRRQLGR	142	2.3000	28.75
15	LGSYAINPA	409	2.3000	28.75
16	LRYTDPHNS	615	2.3000	28.75
17	LVQMLAPLA	866	2.3000	28.75

18	WIGRSTGAV	306	2.2000	27.50
19	LQRVWRLVV	789	2.2000	27.50
20	VQMLAPLAP	867	2.2000	27.50
21	LQIYNAWFD	177	2.0000	25.00
22	LFARQRYWG	520	2.0000	25.00
23	VVNFRRQLG	141	1.9000	23.75
24	VKTMQRNWI	299	1.9000	23.75
25	LHRTIVGVS	820	1.9000	23.75
26	IVVAGRLVN	957	1.9000	23.75
27	MFPYPSGEG	75	1.7000	21.25
28	LVDELVAAS	355	1.7000	21.25
29	FKLRDWLFA	514	1.7000	21.25
30	LRVYEMSMG	761	1.7000	21.25
31	VAGRLVNLV	959	1.7000	21.25
32	YARYFRMVG	98	1.6000	20.00
33	FRMVGRNVL	102	1.6000	20.00
34	LVNWCPGLG	238	1.6000	20.00
35	YRFLQRVWR	786	1.6000	20.00
36	VQDMFPYPS	72	1.4000	17.50
37	WATKDVVGA	777	1.4000	17.50
38	WIFLQIYNA	174	1.2000	15.00
39	VALFSARAA	314	0.9000	11.25
40	VQVNGKVRG	913	0.9000	11.25
41	YELRYTDPH	613	0.8800	11.00
42	LVYRADSLV	231	0.8000	10.00
43	LESAGRGRA	502	0.8000	10.00
44	IEFKLRDWL	512	0.8000	10.00
45	LKPYSRDTN	594	0.8000	10.00
46	LHLLYSRFW	663	0.8000	10.00
47	LRALHRTIV	817	0.8000	10.00
48	LPIVEVIAG	458	0.7000	8.75
49	VMPQWAGSS	603	0.6000	7.50
50	VSSREPYRR	681	0.6000	7.50
51	LAPLAPHIA	870	0.6000	7.50

52	VYARYFRMV	97	0.5000	6.25
53	VNPLWTYGG	368	0.5000	6.25
54	VEPLVQMLA	863	0.5000	6.25
55	LYSRFWHKV	666	0.4000	5.00
56	MRITAYADR	277	0.3000	3.75
57	IMAVPGHDQ	439	0.3000	3.75
58	LTKKHRDAV	850	0.2000	2.50
59	VLTDEKVQA	938	0.2000	2.50
60	VWRLVVDEH	792	0.1800	2.25
61	IADYVLAGY	426	0.1000	1.25
62	YFRMVGRNV	101	-0.1000	0
63	VLYDLGHVS	674	-0.1000	0
64	VIVVAGRLV	956	-0.1000	0
65	WMGPRPAEH	635	-0.1200	0
66	VYRADSLVN	232	-0.2000	0
67	LVLAPEHDL	347	-0.2000	0
68	IFIADYVLA	424	-0.2000	0
69	VPAAKRAIV	491	-0.2000	0
70	LYDLGHVSS	675	-0.2000	0
71	YRRLVNQGY	687	-0.2000	0
72	LGTFNVPNP	45	-0.3000	0
73	VGSLAPPDG	54	-0.3000	0
74	MGPRPAEHG	636	-0.3000	0
75	FQEF GKIGK	733	-0.3000	0
76	VSPDEICDA	747	-0.3000	0
77	LGNTTSLAH	885	-0.3200	0
78	WARLGTFNV	42	-0.4000	0
79	VLHALGFDA	109	-0.4000	0
80	IEVFTTRPD	331	-0.4000	0
81	LWTYGGGTP	371	-0.4000	0
82	VGGAEHAVL	655	-0.4000	0
83	IQAYAYTDA	696	-0.4000	0
84	FLQRVWRLV	788	-0.4000	0
85	LRLGNTTSL	883	-0.4000	0

86	LHVGHPGLGY	84	-0.5000	0
87	VGRNVLHAL	105	-0.5000	0
88	LRQWMMRIT	272	-0.5000	0
89	IGRSTGAVA	307	-0.5000	0
90	FWHKVLYDL	670	-0.5000	0

ALLELE: DRB1_0806	Threshold for 3 % with score: 2.4	Highest Score achievable by any peptide: 8.6
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Rank	Sequence	At Position	Score	% of Highest Score
1	MVGRNVLHA	104	5.5000	63.95
2	VRGRVVVAA	919	4.8000	55.81
3	LQIYNAWFD	177	4.7000	54.65
4	WMMRITAYA	275	4.6000	53.49
5	YRLVYRADS	229	4.2000	48.84
6	FRKRLRQWM	268	4.0000	46.51
7	IVVAGRLVN	957	3.9000	45.35
8	VVGAYRFLQ	782	3.7000	43.02
9	VNGKVRGRV	915	3.4000	39.53
10	VFRKRLRQW	267	3.3000	38.37
11	LFARQRYWG	520	3.3000	38.37
12	VVNFRRQLG	141	3.2000	37.21
13	IAAYRRAIA	383	3.2000	37.21
14	MFPYPSGEG	75	3.0000	34.88
15	LRVYEMSMG	761	3.0000	34.88
16	YARYFRMVG	98	2.9000	33.72
17	LVNWCPGLG	238	2.9000	33.72
18	MQRNWIGRS	302	2.8000	32.56
19	LKPYSRDTN	594	2.8000	32.56
20	FRMVGRNVL	102	2.6000	30.23
21	YRRAIAAKS	386	2.6000	30.23
22	LAGYGTGAI	431	2.6000	30.23
23	VQMLAPLAP	867	2.6000	30.23
24	WIGRSTGAV	306	2.5000	29.07

25	LQRVWRLVV	789	2.5000	29.07
26	LNGMSVPAA	486	2.4000	27.91
27	VNFRRQLGR	142	2.3000	26.74
28	IEVFTTRPD	331	2.3000	26.74
29	LGSYAINPA	409	2.3000	26.74
30	LRYTDPHNS	615	2.3000	26.74
31	LVQMLAPLA	866	2.3000	26.74
32	VQVNGKVRG	913	2.2000	25.58
33	VKTMQRNWI	299	2.1000	24.42
34	YELRYTDPH	613	2.1000	24.42
35	MMRITAYAD	276	2.0000	23.26
36	LFSARAASD	316	2.0000	23.26
37	LPIVEVIAG	458	2.0000	23.26
38	VDLYVGGAE	651	2.0000	23.26
39	VAGRLVNLV	959	2.0000	23.26
40	LHRTIVGVS	820	1.9000	22.09
41	VYRADSLVN	232	1.8000	20.93
42	VNPLWTYGG	368	1.8000	20.93
43	IEFKLRDWL	512	1.8000	20.93
44	VVAADTDEE	924	1.8000	20.93
45	LVDELVAAS	355	1.7000	19.77
46	FKLRDWLFA	514	1.7000	19.77
47	LHLLYSRFW	663	1.7000	19.77
48	YRFLQRVWR	786	1.6000	18.60
49	VQDMFPYPS	72	1.4000	16.28
50	WATKDVVGA	777	1.4000	16.28
51	VWRLVVDEH	792	1.4000	16.28
52	IVEVIAGGN	460	1.3000	15.12
53	YVPAEQVIE	708	1.3000	15.12
54	WIFLQIYNA	174	1.2000	13.95
55	IADYVLAGY	426	1.2000	13.95
56	LVYRADSLV	231	1.1000	12.79
57	IMAVPGHDQ	439	1.1000	12.79
58	WMGPRPAEH	635	1.1000	12.79

59	LRALHRTIV	817	1.1000	12.79
60	VGSLAPPDG	54	1.0000	11.63
61	LGRLGFGHD	148	1.0000	11.63
62	MGPRPAEHG	636	1.0000	11.63
63	VALFSARAA	314	0.9000	10.47
64	YRRLVNQGY	687	0.9000	10.47
65	LWLRLGNTT	881	0.9000	10.47
66	LGNTTSLAH	885	0.9000	10.47
67	VQAFLAGAT	944	0.9000	10.47
68	VYARYFRMV	97	0.8000	9.30
69	LGTVLANEE	245	0.8000	9.30
70	LVLAPEHDL	347	0.8000	9.30
71	LESAGRGRA	502	0.8000	9.30
72	LRDWLFARQ	516	0.8000	9.30
73	FSARAASDD	317	0.7000	8.14
74	IVDRLESAG	498	0.7000	8.14
75	LYSRFWHKV	666	0.7000	8.14
76	LHVGHPLGY	84	0.6000	6.98
77	VMPQWAGSS	603	0.6000	6.98
78	VGGAEHAVL	655	0.6000	6.98
79	VSSREPYRR	681	0.6000	6.98
80	LKNSVSPDE	743	0.6000	6.98
81	LAPLAPHIA	870	0.6000	6.98
82	LRLGNTTSL	883	0.6000	6.98
83	VGRNVLHAL	105	0.5000	5.81
84	YAINPANGE	412	0.5000	5.81
85	YVLAGYGTG	429	0.5000	5.81
86	FWHKVLYDL	670	0.5000	5.81
87	LTKKHRDAV	850	0.5000	5.81
88	VEPLVQMLA	863	0.5000	5.81
89	LRQWMMRIT	272	0.4000	4.65
90	YWMGPRPAE	634	0.4000	4.65
91	LVVDEHTGE	795	0.4000	4.65
92	FESGARCLD	201	0.3000	3.49

93	MRITAYADR	277	0.3000	3.49
94	YLVLAPEHD	346	0.3000	3.49
95	FIADYVLAG	425	0.3000	3.49
96	FVYPGPDGE	721	0.3000	3.49

ALLELE: DRB1_0813	Threshold for 3 % with score: 1.9	Highest Score achievable by any peptide: 8.7
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Rank	Sequence	At Position	Score	% of Highest Score
1	WMMRITAYA	275	5.6000	64.37
2	YRLVYRADS	229	5.2000	59.77
3	MVGRNVLHA	104	5.1000	58.62
4	FRKRLRQWM	268	4.9000	56.32
5	VRGRVVVAA	919	4.8000	55.17
6	FRMVGRNVL	102	4.6000	52.87
7	YARYFRMVG	98	3.6000	41.38
8	YRRAIAAKS	386	3.6000	41.38
9	YRFLQRVWR	786	3.6000	41.38
10	WATKDVVGA	777	3.4000	39.08
11	LGSYAINPA	409	3.3000	37.93
12	FKLRDWLFA	514	3.3000	37.93
13	WIFLQIYNA	174	3.1000	35.63
14	YELRYTDPH	613	3.0800	35.40
15	VKTMQRNWI	299	2.9000	33.33
16	WLRLGNTTS	882	2.9000	33.33
17	VVGAYRFLQ	782	2.7500	31.61
18	VAGRLVNLV	959	2.7000	31.03
19	LRALHRTIV	817	2.6000	29.89
20	WIGRSTGAV	306	2.5000	28.74
21	LRVYEMSMG	761	2.5000	28.74
22	FGKIGKSLK	736	2.3000	26.44
23	IAAYRRAIA	383	2.2000	25.29
24	VVNFRRQLG	141	1.9000	21.84
25	VNFRRQLGR	142	1.9000	21.84

26	LFARQRYWG	520	1.9000	21.84
27	LRYTDPHNS	615	1.8000	20.69
28	YRRLVNQGY	687	1.8000	20.69
29	LQRVWRLVV	789	1.8000	20.69
30	LRNNTATAK	834	1.8000	20.69
31	VQMLAPLAP	867	1.8000	20.69
32	LVYRADSLV	231	1.6000	18.39
33	LNGMSVPAA	486	1.6000	18.39
34	FQEFGKIGK	733	1.5800	18.16
35	LQIYNAWFD	177	1.5000	17.24
36	LVQMLAPLA	866	1.5000	17.24
37	IVVAGRLVN	957	1.5000	17.24
38	WARLGTFFNV	42	1.4500	16.67
39	FNVPNVGS	48	1.4000	16.09
40	FWHKVLYDL	670	1.4000	16.09
41	IQAYAYTDA	696	1.4000	16.09
42	LRLGNTTSL	883	1.4000	16.09
43	VNGKVRGRV	915	1.4000	16.09
44	VQDMFPYPS	72	1.3000	14.94
45	VFRKRLRQW	267	1.1000	12.64
46	MQRNWIGRS	302	1.1000	12.64
47	IEFKLRDWL	512	1.0000	11.49
48	LKPYSRDTN	594	1.0000	11.49
49	LWLRLGNTT	881	1.0000	11.49
50	YRYTAELAA	24	0.9000	10.34
51	VQVNGKVRG	913	0.9000	10.34
52	WMGPRPAEH	635	0.8800	10.11
53	FSARAASDD	317	0.8000	9.20
54	FAALRNNTA	831	0.8000	9.20
55	LVDELVAAS	355	0.7000	8.05
56	LAGYGTGAI	431	0.7000	8.05
57	FGLPIVEVI	456	0.7000	8.05
58	YFRMVGRNV	101	0.6000	6.90
59	FIADYVLAG	425	0.6000	6.90

60	WVHVLDLDLG	583	0.6000	6.90
61	LPIVEVIAG	458	0.5800	6.67
62	YAINPANGE	412	0.5000	5.75
63	VSSREPYRR	681	0.5000	5.75
64	VEPLVQMLA	863	0.5000	5.75
65	VNPLWTYGG	368	0.4000	4.60
66	MGPRPAEHG	636	0.4000	4.60
67	LTKKHRDAV	850	0.4000	4.60
68	VWRLVVDEH	792	0.3800	4.37
69	YRADSLVNW	233	0.3000	3.45
70	YLVLAPEHD	346	0.3000	3.45
71	YLNGMSVPA	485	0.3000	3.45
72	YVPAEQVIE	708	0.3000	3.45
73	FLQRVWRLV	788	0.3000	3.45
74	YGTGAIMAV	434	0.2000	2.30
75	IVDRLESAG	498	0.2000	2.30
76	LHRTIVGVS	820	0.2000	2.30
77	YLVDETVEY	903	0.2000	2.30
78	VLTDEKVQA	938	0.2000	2.30
79	YIATDVYAR	92	0.1000	1.15
80	IAGGNISES	464	0.1000	1.15
81	LAPLAPHIA	870	0.1000	1.15
82	LVNWCPLGLG	238	-0.1000	0
83	FPVFRKRLR	265	-0.1000	0
84	LYSRFWHKV	666	-0.1000	0
85	IFIADYVLA	424	-0.2000	0
86	IMAVPGHDQ	439	-0.2000	0
87	LYDLGHVSS	675	-0.2000	0
88	IGKSLKNSV	739	-0.2000	0
89	FLQIYNAWF	176	-0.3000	0
90	MGPLEASRP	768	-0.3000	0
91	FYRWTQWIF	168	-0.4000	0
92	VALFSARAA	314	-0.4000	0

ALLELE: DRB1_0817	Threshold for 3 % with score: 2.8	Highest Score achievable by any peptide: 10.1
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Rank	Sequence	At Position	Score	% of Highest Score
1	MVGRNVLHA	104	6.3000	62.38
2	WMMRITAYA	275	5.6000	55.45
3	YARYFRMVG	98	5.5000	54.46
4	YRLVYRADS	229	5.2000	51.49
5	FRKRLRQWM	268	5.1000	50.50
6	IVVAGRLVN	957	4.7000	46.53
7	LQIYNAWFD	177	4.5000	44.55
8	FKLRDWLFA	514	4.5000	44.55
9	VRGRVVVAA	919	4.3000	42.57
10	FRMVGRNVL	102	3.9000	38.61
11	WIGRSTGAV	306	3.6000	35.64
12	YRRAIAAKS	386	3.6000	35.64
13	VQMLAPLAP	867	3.4000	33.66
14	LQRVWRLVV	789	3.3000	32.67
15	VVGAYRFLQ	782	3.2000	31.68
16	VNFRRQLGR	142	3.1000	30.69
17	FIADYVLAG	425	3.1000	30.69
18	YRFLQRVWR	786	3.1000	30.69
19	LFARQRYWG	520	3.0000	29.70
20	WIFLQIYNA	174	2.9000	28.71
21	WATKDVVGA	777	2.9000	28.71
22	YELRYTDPH	613	2.8000	27.72
23	YVPAEQVIE	708	2.8000	27.72
24	VYRADSLVN	232	2.6000	25.74
25	LPIVEVIAG	458	2.6000	25.74
26	LNGMSVPAA	486	2.5500	25.25
27	YWMGPRPAE	634	2.5500	25.25
28	VFRKRLRQW	267	2.5000	24.75
29	VNGKVRGRV	915	2.5000	24.75
30	LVQMLAPLA	866	2.4500	24.26

31	YLVLAPEHD	346	2.4000	23.76
32	VVNFRRQLG	141	2.3000	22.77
33	IAAYRRAIA	383	2.2000	21.78
34	FWHKVLYDL	670	2.2000	21.78
35	YRYTAELAA	24	2.1000	20.79
36	MFPYPSGEG	75	2.1000	20.79
37	WMGPRPAEH	635	2.1000	20.79
38	LVNWCPGLG	238	2.0000	19.80
39	YTG DGILVN	474	2.0000	19.80
40	LRYTDPHNS	615	2.0000	19.80
41	YRRLVNQGY	687	2.0000	19.80
42	LRVYEMSMG	761	2.0000	19.80
43	MQRNWIGRS	302	1.9000	18.81
44	YAINPANGE	412	1.8000	17.82
45	MMRITAYAD	276	1.7000	16.83
46	FSARAASDD	317	1.7000	16.83
47	LAGYGTGAI	431	1.7000	16.83
48	YIQAYAYTD	695	1.7000	16.83
49	LGNTTSLAH	885	1.7000	16.83
50	VQVNGKVRG	913	1.7000	16.83
51	LGSYAINPA	409	1.6000	15.84
52	YVLAGYGTG	429	1.6000	15.84
53	FQEF GKIGK	733	1.6000	15.84
54	IEVFTTRPD	331	1.5000	14.85
55	VNPLW TYGG	368	1.5000	14.85
56	LKPYSRDTN	594	1.5000	14.85
57	WARLGT FNV	42	1.4000	13.86
58	LHVGHPLGY	84	1.4000	13.86
59	YFRMVGRNV	101	1.4000	13.86
60	VKTMQRNWI	299	1.4000	13.86
61	FARAFGLPI	452	1.4000	13.86
62	YTNHLTKKH	846	1.4000	13.86
63	FESGARCLD	201	1.3000	12.87
64	VAGRLVNLV	959	1.3000	12.87

65	LRALHRTIV	817	1.2000	11.88
66	WLRLGNTTS	882	1.2000	11.88
67	VGSLAPPDG	54	1.1500	11.39
68	VQDMFPYPS	72	1.1000	10.89
69	FRRQLGRLG	144	1.1000	10.89
70	YGTGAIMAV	434	1.1000	10.89
71	MGPRPAEHG	636	1.1000	10.89
72	VDLYVGGAE	651	1.1000	10.89
73	FLQRVWRLV	788	1.1000	10.89
74	VEPLVQMLA	863	1.1000	10.89
75	YEMSMGPLE	764	1.0500	10.40
76	LFSARAASD	316	1.0000	9.90
77	LVNSDYLNG	480	1.0000	9.90
78	WLFARQRYW	519	1.0000	9.90
79	FVYPPDGE	721	1.0000	9.90
80	LHRTIVGVS	820	1.0000	9.90
81	FNVPNPVGS	48	0.9000	8.91
82	LHLLYSRFW	663	0.9000	8.91
83	FYRWTQWIF	168	0.8000	7.92
84	IMAVPGHDQ	439	0.8000	7.92
85	VGAYRFLQR	783	0.8000	7.92
86	YLVDETVEY	903	0.8000	7.92
87	LKNSVSPDE	743	0.7500	7.43
88	YRADSLVNW	233	0.7000	6.93
89	LVDELVAAS	355	0.7000	6.93
90	LRLGNTTSL	883	0.7000	6.93
91	FDAFGLPAE	115	0.6500	6.44
92	YRWTQWIFL	169	0.6000	5.94
93	FLQIYNAWF	176	0.6000	5.94
94	VIAGGNISE	463	0.6000	5.94
95	YSRFWHKVL	667	0.6000	5.94
96	LVLAPEHDL	347	0.5000	4.95

ALLELE: DRB1_1101	Threshold for 3 % with score: 1.1	Highest Score achievable by any peptide: 8.3
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRLVYRADS	229	5.3000	63.86
2	YRRAIAAKS	386	3.6000	43.37
3	YRFLQRVWR	786	3.5000	42.17
4	VQMLAPLAP	867	3.4000	40.96
5	MVGRNVLHA	104	3.3000	39.76
6	WIFLQIYNA	174	3.3000	39.76
7	LQRVWRLVV	789	3.1000	37.35
8	FRMVGRNVL	102	3.0000	36.14
9	IVVAGRLVN	957	2.7000	32.53
10	WMMRITAYA	275	2.6000	31.33
11	YRYTAELAA	24	2.5000	30.12
12	LRYTDPHNS	615	2.4000	28.92
13	VVGAYRFLQ	782	2.4000	28.92
14	FQEFGKIGK	733	2.2000	26.51
15	LNGMSVPAA	486	2.1500	25.90
16	LVQMLAPLA	866	2.0500	24.70
17	MQRNWIGRS	302	1.9000	22.89
18	WLR LGNTTS	882	1.6000	19.28
19	WARLGTFNV	42	1.5000	18.07
20	FKLRDWLFA	514	1.5000	18.07
21	VEPLVQMLA	863	1.5000	18.07
22	LPIVEVIAG	458	1.4000	16.87
23	LHRTIVGVS	820	1.4000	16.87
24	YARYFRMVG	98	1.3000	15.66
25	YRRLVNQGY	687	1.3000	15.66
26	LRALHRTIV	817	1.3000	15.66
27	VRGRVVVAA	919	1.3000	15.66
28	FARAFGLPI	452	1.2000	14.46
29	FIADYVLAG	425	1.1000	13.25
30	FGKIGKSLK	736	1.1000	13.25
31	FRKRLRQWM	268	1.0000	12.05

32	VVNFRRQLG	141	0.9000	10.84
33	LGNTTSLAH	885	0.8800	10.60
34	VKTMQRNWI	299	0.8000	9.64
35	VQDMFPYPS	72	0.7000	8.43
36	YFRMVGRNV	101	0.7000	8.43
37	LAPLAPHIA	870	0.7000	8.43
38	VYRADSLVN	232	0.6000	7.23
39	LVNWCPGLG	238	0.6000	7.23
40	VNPLWTYGG	368	0.6000	7.23
41	LVNQGYIQA	690	0.6000	7.23
42	YTNHLTKKH	846	0.5800	6.99
43	YAYTDARGS	699	0.5000	6.02
44	FRRQLGRLG	144	0.4000	4.82
45	LHLLYSRFW	663	0.4000	4.82
46	IEYTNHLTK	844	0.4000	4.82
47	VQVNGKVRG	913	0.4000	4.82
48	YIATDVYAR	92	0.3000	3.61
49	FLQIYNAWF	176	0.3000	3.61
50	FPVFRKRLR	265	0.3000	3.61
51	WIGRSTGAV	306	0.3000	3.61
52	YVLAGYGTG	429	0.3000	3.61
53	VMPQWAGSS	603	0.3000	3.61
54	VGSLAPPDG	54	0.2500	3.01
55	FNVPNPVGS	48	0.2000	2.41
56	WMGPRPAEH	635	0.1800	2.17
57	VNFRRQLGR	142	0.1000	1.20
58	YLVLAPEHD	346	0.1000	1.20
59	YGTGAIMAV	434	0.1000	1.20
60	IMAVPGHDQ	439	0.1000	1.20
61	WLFARQRYW	519	0.1000	1.20
62	WATKDVVGA	777	0.1000	1.20
63	LRNNTATAK	834	0.1000	1.20
64	LESAGRGRA	502	-0.1000	0
65	FYRWTQWIF	168	-0.2000	0

66	YVPAEQVIE	708	-0.2000	0
67	LGTFNVPNP	45	-0.2500	0
68	FLAGATPRK	947	-0.2500	0
69	WTQWIFLQI	171	-0.3000	0
70	WAKLTAGER	214	-0.3000	0
71	MRITAYADR	277	-0.3000	0
72	LYDLGHVSS	675	-0.3000	0
73	LHVGHPLGY	84	-0.4000	0
74	MMRITAYAD	276	-0.4000	0
75	FGATYLVLA	342	-0.5000	0
76	LVLAPEHDL	347	-0.5000	0
77	YSRFWHKVL	667	-0.5000	0
78	FAALRNNTA	831	-0.5000	0
79	VNWCPLGT	239	-0.6000	0
80	FGLPIVEVI	456	-0.6000	0
81	VNGKVRGRV	915	-0.6000	0
82	IAAYRRAIA	383	-0.7000	0
83	IFIADYVLA	424	-0.7000	0
84	YTG DGILVN	474	-0.7000	0
85	IDTLRALHR	814	-0.7000	0
86	VWRLVVDEH	792	-0.7200	0
87	VGRNVLHAL	105	-0.8000	0
88	LDDLDVLDW	287	-0.8000	0
89	WVHVLDLGLG	583	-0.8000	0
90	VIVVAGRLV	956	-0.8000	0

ALLELE: DRB1_1102	Threshold for 3 % with score: 1.8	Highest Score achievable by any peptide: 8.4
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Rank	Sequence	At Position	Score	% of Highest Score
1	VVGAYRFLQ	782	4.4000	52.38
2	MVGRNVLHA	104	4.1000	48.81
3	VRGRVVVAA	919	3.7000	44.05
4	LRYTDPHNS	615	3.4000	40.48

5	VVNFRRQLG	141	3.0000	35.71
6	YRLVYRADS	229	3.0000	35.71
7	VALFSARAA	314	3.0000	35.71
8	VFRKRLRQW	267	2.7000	32.14
9	VKTMQRNWI	299	2.7000	32.14
10	YRRAIAAKS	386	2.6000	30.95
11	VQMLAPLAP	867	2.6000	30.95
12	IVVAGRLVN	957	2.6000	30.95
13	WMMRITAYA	275	2.5000	29.76
14	LNGMSVPAA	486	2.5000	29.76
15	LVQMLAPLA	866	2.4000	28.57
16	LHLLYSRFW	663	2.3000	27.38
17	YRFLQRVWR	786	2.3000	27.38
18	LERQESREK	396	2.2000	26.19
19	FRRQLGRLG	144	2.0000	23.81
20	LRQWMMRIT	272	2.0000	23.81
21	LRALHRTIV	817	2.0000	23.81
22	VQVNGKVRG	913	2.0000	23.81
23	MQRNWIGRS	302	1.9000	22.62
24	LGSYAINPA	409	1.9000	22.62
25	YTNHLTKKH	846	1.8800	22.38
26	FRMVGRNVL	102	1.8000	21.43
27	WIFLQIYNA	174	1.8000	21.43
28	LQIYNAWFD	177	1.8000	21.43
29	VQDMFPYPS	72	1.7000	20.24
30	IEVFTTRPD	331	1.7000	20.24
31	LQRVWRLVV	789	1.7000	20.24
32	FRKRLRQWM	268	1.6000	19.05
33	LVDELVAAS	355	1.6000	19.05
34	LRNNTATAK	834	1.6000	19.05
35	LAPLAPHIA	870	1.5000	17.86
36	IAAYRRAIA	383	1.4000	16.67
37	LVNWCPGLG	238	1.3000	15.48
38	FPVFRKRLR	265	1.3000	15.48

39	LVNQGYYIQA	690	1.3000	15.48
40	VMPQWAGSS	603	1.2000	14.29
41	LAGATPRKV	948	1.2000	14.29
42	YFRMVGRNV	101	1.1000	13.10
43	VLHALGFDA	109	1.1000	13.10
44	VNPLWTYGG	368	1.1000	13.10
45	VPGHDQRDW	442	1.1000	13.10
46	LVLAPEHDL	347	1.0000	11.90
47	VAGRLVNLV	959	1.0000	11.90
48	VNFRRQLGR	142	0.9000	10.71
49	WATKDVVGA	777	0.9000	10.71
50	WARLGTENV	42	0.8000	9.52
51	VGRNVLHAL	105	0.8000	9.52
52	IFIADYVLA	424	0.8000	9.52
53	LFARQRYWG	520	0.8000	9.52
54	LHRTIVGVS	820	0.8000	9.52
55	VLTDEKVQA	938	0.8000	9.52
56	VWRLVVDEH	792	0.7800	9.29
57	LGTFNVPNP	45	0.7000	8.33
58	LRDWLFARQ	516	0.7000	8.33
59	WLFARQRYW	519	0.7000	8.33
60	VLYDLGHVS	674	0.7000	8.33
61	LFVQDMFPY	70	0.6000	7.14
62	YAYTDARGS	699	0.6000	7.14
63	IGKSLKNSV	739	0.6000	7.14
64	LRLGNTTSL	883	0.6000	7.14
65	VNGKVRGRV	915	0.6000	7.14
66	VYRADSLVN	232	0.5000	5.95
67	LYDLGHVSS	675	0.5000	5.95
68	VEPLVQMLA	863	0.5000	5.95
69	VIVVAGRLV	956	0.5000	5.95
70	FYRWTQWIF	168	0.4000	4.76
71	IMAVPGHDQ	439	0.3000	3.57
72	FKLRDWLFA	514	0.3000	3.57

73	YRRLVNQGY	687	0.3000	3.57
74	VEVFQEF GK	730	0.3000	3.57
75	FQEF GKIGK	733	0.3000	3.57
76	LRVYEMSMG	761	0.3000	3.57
77	WLRLGNTTS	882	0.3000	3.57
78	LGNTTSLAH	885	0.2800	3.33
79	VYARYFRMV	97	0.2000	2.38
80	MRITAYADR	277	0.2000	2.38
81	IEFKLRDWL	512	0.2000	2.38
82	VGSLAPPDG	54	0.1000	1.19
83	YARYFRMVG	98	0.1000	1.19
84	IFLQIYNAW	175	0.1000	1.19
85	YRYTAELAA	24	-0.1000	0
86	FNVPNPVGS	48	-0.1000	0
87	IGRSTGAVA	307	-0.1000	0
88	LKPYSRDTN	594	-0.1000	0
89	LLYSRFWHK	665	-0.1000	0
90	IERGDRFVY	715	-0.1000	0
91	LPIVEVIAG	458	-0.2000	0
92	VPAAKRAIV	491	-0.2000	0
93	LESAGRGRA	502	-0.2000	0
94	IEYTNHLTK	844	-0.2000	0

ALLELE: DRB1_1104	Threshold for 3 % with score: 2.0	Highest Score achievable by any peptide: 8.3
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Rank	Sequence	At Position	Score	% of Highest Score
1	VQMLAPLAP	867	4.4000	53.01
2	MVGRNVLHA	104	4.3000	51.81
3	YRLVYRADS	229	4.3000	51.81
4	LQRVWRLVV	789	4.1000	49.40
5	IVVAGRLVN	957	3.7000	44.58
6	LRYTDPHNS	615	3.4000	40.96
7	VVGAYRFLQ	782	3.4000	40.96

8	LNGMSVPAA	486	3.1500	37.95
9	LVQMLAPLA	866	3.0500	36.75
10	MQRNWIGRS	302	2.9000	34.94
11	YRRAIAAKS	386	2.6000	31.33
12	YRFLQRVWR	786	2.5000	30.12
13	VEPLVQMLA	863	2.5000	30.12
14	LPIVEVIAG	458	2.4000	28.92
15	LHRTIVGVS	820	2.4000	28.92
16	WIFLQIYNA	174	2.3000	27.71
17	LRALHRTIV	817	2.3000	27.71
18	VRGRVVVAA	919	2.3000	27.71
19	FRMVGRNVL	102	2.0000	24.10
20	VVNFRRQLG	141	1.9000	22.89
21	LGNTTSLAH	885	1.8800	22.65
22	VKTMQRNWI	299	1.8000	21.69
23	VQDMFPYPS	72	1.7000	20.48
24	LAPLAPHIA	870	1.7000	20.48
25	VYRADSLVN	232	1.6000	19.28
26	LVNWCPGLG	238	1.6000	19.28
27	WMMRITAYA	275	1.6000	19.28
28	VNPLWTYGG	368	1.6000	19.28
29	LVNQGYIQA	690	1.6000	19.28
30	YRYTAELAA	24	1.5000	18.07
31	LHLLYSRFW	663	1.4000	16.87
32	IEYTNHLTK	844	1.4000	16.87
33	VQVNGKVRG	913	1.4000	16.87
34	VMPQWAGSS	603	1.3000	15.66
35	VGSLAPPDG	54	1.2500	15.06
36	FQEF GKIGK	733	1.2000	14.46
37	VNFRRQLGR	142	1.1000	13.25
38	IMAVPGHDQ	439	1.1000	13.25
39	LRNNTATAK	834	1.1000	13.25
40	VALFSARAA	314	1.0000	12.05
41	LVDELVAAS	355	1.0000	12.05

42	LVNSDYLNQ	480	1.0000	12.05
43	LESAGRGRA	502	0.9000	10.84
44	LGTFNVPNP	45	0.7500	9.04
45	MRITAYADR	277	0.7000	8.43
46	LYDLGHVSS	675	0.7000	8.43
47	LHVGHPLGY	84	0.6000	7.23
48	MMRITAYAD	276	0.6000	7.23
49	WRLGNTTS	882	0.6000	7.23
50	WARLGTENV	42	0.5000	6.02
51	LVLAPHDL	347	0.5000	6.02
52	FKLRDWLFA	514	0.5000	6.02
53	VNWCPLGT	239	0.4000	4.82
54	VNGKVRGRV	915	0.4000	4.82
55	YARYFRMVG	98	0.3000	3.61
56	IAAYRAIA	383	0.3000	3.61
57	IFIADYVLA	424	0.3000	3.61
58	YRRLVNQGY	687	0.3000	3.61
59	IDTLRALHR	814	0.3000	3.61
60	VWRLVVDEH	792	0.2800	3.37
61	VGRNVLHAL	105	0.2000	2.41
62	LDDLDVLDW	287	0.2000	2.41
63	FARAFGLPI	452	0.2000	2.41
64	VIVVAGRLV	956	0.2000	2.41
65	VLHALGFDA	109	0.1000	1.20
66	LFGATYLV	341	0.1000	1.20
67	FIADYVLAG	425	0.1000	1.20
68	VEVIAGGNI	461	0.1000	1.20
69	FGKIGKSLK	736	0.1000	1.20
70	LQIYNAWFD	177	-0.1000	0
71	LRDWLFRQ	516	-0.1000	0
72	VLYDLGHVS	674	-0.1000	0
73	VFRKRLRQW	267	-0.2000	0
74	IGRSTGAVA	307	-0.2000	0
75	VPAAKRAIV	491	-0.2000	0

76	YFRMVGRNV	101	-0.3000	0
77	IEVFTTRPD	331	-0.3000	0
78	LGSYAINPA	409	-0.3000	0
79	LFARQRYWG	520	-0.3000	0
80	LVAASWPAG	359	-0.3500	0
81	VIDEYRLVY	225	-0.4000	0
82	LRQWMMRIT	272	-0.4000	0
83	LERQESREK	396	-0.4000	0
84	LAGYGTGAI	431	-0.4000	0
85	VGGAEHAVL	655	-0.4000	0
86	LAGATPRKV	948	-0.4000	0
87	YTNHLTKKH	846	-0.4200	0
88	VELPDVPDY	551	-0.4500	0
89	IVEVIAGGN	460	-0.5000	0
90	YAYTDARGS	699	-0.5000	0
91	LGDGLKPYS	590	-0.5500	0

ALLELE: DRB1_1106 Threshold for 3 % with score: 2.0 Highest Score achievable by any peptide: 8.3

Rank	Sequence	At Position	Score	% of Highest Score
1	VQMLAPLAP	867	4.4000	53.01
2	MVGRNVLHA	104	4.3000	51.81
3	YRLVYRADS	229	4.3000	51.81
4	LQRVWRLVV	789	4.1000	49.40
5	IVVAGRLVN	957	3.7000	44.58
6	LRYTDPHNS	615	3.4000	40.96
7	VVGAYRFLQ	782	3.4000	40.96
8	LNGMSVPAA	486	3.1500	37.95
9	LVQMLAPLA	866	3.0500	36.75
10	MQRNWIGRS	302	2.9000	34.94
11	YRRAIAAKS	386	2.6000	31.33
12	YRFLQRVWR	786	2.5000	30.12
13	VEPLVQMLA	863	2.5000	30.12

14	LPIVEVIAG	458	2.4000	28.92
15	LHRTIVGVS	820	2.4000	28.92
16	WIFLQIYNA	174	2.3000	27.71
17	LRALHRTIV	817	2.3000	27.71
18	VRGRVVVAA	919	2.3000	27.71
19	FRMVGRNVL	102	2.0000	24.10
20	VVNFRRQLG	141	1.9000	22.89
21	LGNTTSLAH	885	1.8800	22.65
22	VKTMQRNWI	299	1.8000	21.69
23	VQDMFPYPS	72	1.7000	20.48
24	LAPLAPHIA	870	1.7000	20.48
25	VYRADSLVN	232	1.6000	19.28
26	LVNWCPGLG	238	1.6000	19.28
27	WMMRITAYA	275	1.6000	19.28
28	VNPLWTYGG	368	1.6000	19.28
29	LVNQGYIQA	690	1.6000	19.28
30	YRYTAELAA	24	1.5000	18.07
31	LHLLYSRFW	663	1.4000	16.87
32	IEYTNHLTK	844	1.4000	16.87
33	VQVNGKVRG	913	1.4000	16.87
34	VMPQWAGSS	603	1.3000	15.66
35	VGSLAPPDG	54	1.2500	15.06
36	FQEF GKIGK	733	1.2000	14.46
37	VNFRRQLGR	142	1.1000	13.25
38	IMAVPGHDQ	439	1.1000	13.25
39	LRNNTATAK	834	1.1000	13.25
40	VALFSARAA	314	1.0000	12.05
41	LVDELVAAS	355	1.0000	12.05
42	LVNSDY LNG	480	1.0000	12.05
43	LESAGR GRA	502	0.9000	10.84
44	LGTFNVPNP	45	0.7500	9.04
45	MRITAYADR	277	0.7000	8.43
46	LYDLGHVSS	675	0.7000	8.43
47	LHVGHPLGY	84	0.6000	7.23

48	MMRITAYAD	276	0.6000	7.23
49	WLR LGNTTS	882	0.6000	7.23
50	WARLGTFNV	42	0.5000	6.02
51	LVLAPEHDL	347	0.5000	6.02
52	FKLRDWLFA	514	0.5000	6.02
53	VNWCPGLGT	239	0.4000	4.82
54	VNGKVRGRV	915	0.4000	4.82
55	YARYFRMVG	98	0.3000	3.61
56	IAAYRRAIA	383	0.3000	3.61
57	IFIADYVLA	424	0.3000	3.61
58	YRRLVNQGY	687	0.3000	3.61
59	IDTLRALHR	814	0.3000	3.61
60	VWRLVVDEH	792	0.2800	3.37
61	VGRNVLHAL	105	0.2000	2.41
62	LDDLDVLDW	287	0.2000	2.41
63	FARAFGLPI	452	0.2000	2.41
64	VIVVAGRLV	956	0.2000	2.41
65	VLHALGFDA	109	0.1000	1.20
66	LFGATYLVL	341	0.1000	1.20
67	FIADYVLAG	425	0.1000	1.20
68	VEVIAGGNI	461	0.1000	1.20
69	FGKIGKSLK	736	0.1000	1.20
70	LQIYNAWFD	177	-0.1000	0
71	LRDWLFARQ	516	-0.1000	0
72	VLYDLGHVS	674	-0.1000	0
73	VFRKRLRQW	267	-0.2000	0
74	IGRSTGAVA	307	-0.2000	0
75	VPAAKRAIV	491	-0.2000	0
76	YFRMVGRNV	101	-0.3000	0
77	IEVFTTRPD	331	-0.3000	0
78	LGSYAINPA	409	-0.3000	0
79	LFARQRYWG	520	-0.3000	0
80	LVAASWPAG	359	-0.3500	0
81	VIDEYRLVY	225	-0.4000	0

82	LRQWMMRIT	272	-0.4000	0
83	LERQESREK	396	-0.4000	0
84	LAGYGTGAI	431	-0.4000	0
85	VGGAEHAVL	655	-0.4000	0
86	LAGATPRKV	948	-0.4000	0
87	YTNHLTKKH	846	-0.4200	0
88	VELPDVPDY	551	-0.4500	0
89	IVEVIAGGN	460	-0.5000	0
90	YAYTDARGS	699	-0.5000	0
91	LGDGLKPYS	590	-0.5500	0

ALLELE: DRB1_1107	Threshold for 3 % with score: 2.1	Highest Score achievable by any peptide: 9.1
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Rank	Sequence	At Position	Score	% of Highest Score
1	VLTDEKVQA	938	4.8000	52.75
2	VVGAYRFLQ	782	4.3000	47.25
3	YRLVYRADS	229	3.9000	42.86
4	MQRNWIGRS	302	3.6000	39.56
5	LRLGNTTSL	883	3.4000	37.36
6	VLYDLGHVS	674	3.3000	36.26
7	VNSDYLNGM	481	3.0100	33.08
8	VSPDEICDA	747	3.0000	32.97
9	LVVDEHTGE	795	3.0000	32.97
10	YRADSLVNW	233	2.9000	31.87
11	LNGMSVPAA	486	2.9000	31.87
12	FIADYVLAG	425	2.8000	30.77
13	LVQMLAPLA	866	2.8000	30.77
14	YLVDETVEY	903	2.8000	30.77
15	VRGRVVVAA	919	2.8000	30.77
16	MVGRNVLHA	104	2.7000	29.67
17	YRRAIAAKS	386	2.6000	28.57
18	FRMVGRNVL	102	2.5100	27.58
19	LHRTIVGVS	820	2.5000	27.47

20	LRNNTATAK	834	2.5000	27.47
21	LGDGLKPYS	590	2.4000	26.37
22	LRYTDPHNS	615	2.4000	26.37
23	LQRVWRLVV	789	2.4000	26.37
24	LRALHRTIV	817	2.4000	26.37
25	VQVNGKVRG	913	2.4000	26.37
26	IVVAGRLVN	957	2.4000	26.37
27	VTADGRSDR	254	2.3700	26.04
28	MSMGPLEAS	766	2.3000	25.27
29	VMPQWAGSS	603	2.2000	24.18
30	YRFLQRVWR	786	2.2000	24.18
31	IAGGNISES	464	2.1700	23.85
32	VQMLAPLAP	867	2.0000	21.98
33	VVAGRLVNL	958	2.0000	21.98
34	YDSDGRPHA	535	1.9000	20.88
35	IERGDRFVY	715	1.8000	19.78
36	VKTMQRNWI	299	1.7100	18.79
37	IGKSLKNSV	739	1.7100	18.79
38	VPDDKLFVQ	65	1.7000	18.68
39	LVDELVAAS	355	1.7000	18.68
40	LYVGGAEHA	653	1.7000	18.68
41	FLAGATPRK	947	1.7000	18.68
42	LPIVEVIAG	458	1.6000	17.58
43	IVYDSDGRP	533	1.6000	17.58
44	LVNQGYIQA	690	1.6000	17.58
45	WIFLQIYNA	174	1.5500	17.03
46	LHVGHPLGY	84	1.5000	16.48
47	VVNFRRQLG	141	1.5000	16.48
48	FVQDMFPYP	71	1.4000	15.38
49	LESAGRGRA	502	1.4000	15.38
50	WMMRITAYA	275	1.3000	14.29
51	VWRLVVDEH	792	1.2800	14.07
52	LVNWCPGLG	238	1.2000	13.19
53	IGRSTGAVA	307	1.2000	13.19

54	LKNSVSPDE	743	1.2000	13.19
55	VEPLVQMLA	863	1.2000	13.19
56	VQTGTHPRT	127	1.1000	12.09
57	FGHDSRRSF	153	1.1000	12.09
58	IFIADYVLA	424	1.1000	12.09
59	YGTGAIMAV	434	1.1000	12.09
60	LVNSDYLNG	480	1.1000	12.09
61	YLNMGMSVPA	485	1.1000	12.09
62	FGKIGKSLK	736	1.0700	11.76
63	VQDMFPYPS	72	1.0500	11.54
64	LGYIATDVY	90	1.0000	10.99
65	VLHALGFDA	109	1.0000	10.99
66	LGFDAGFLP	113	1.0000	10.99
67	YTG DGILVN	474	1.0000	10.99
68	VELPDVPDY	551	1.0000	10.99
69	VGSLAPPDG	54	0.9000	9.89
70	VNQGYIQAY	691	0.9000	9.89
71	VNPLWYGG	368	0.8500	9.34
72	LTAGERADV	217	0.8000	8.79
73	YGGGTPGEA	374	0.8000	8.79
74	YWMGPRPAE	634	0.8000	8.79
75	LDIDTLRAL	812	0.8000	8.79
76	FNVPNPVGS	48	0.7000	7.69
77	FRKRLRQWM	268	0.7000	7.69
78	VLAGYGTGA	430	0.7000	7.69
79	WRLGNTTS	882	0.7000	7.69
80	VVAADTDEE	924	0.6000	6.59
81	MMRITAYAD	276	0.5500	6.04
82	VAASWPAGV	360	0.5000	5.49
83	LVAASWPAG	359	0.4000	4.40
84	LYDLGHVSS	675	0.4000	4.40
85	MLAPLAPHI	869	0.4000	4.40
86	VNGKVRGRV	915	0.4000	4.40
87	LGSYAINPA	409	0.3100	3.41

88	WARLGTFNV	42	0.3000	3.30
89	VYRADSLVN	232	0.3000	3.30
90	MRITAYADR	277	0.3000	3.30
91	IVGVSEDFE	824	0.3000	3.30
92	FGLPIVEVI	456	0.2000	2.20
93	VEVIAGGNI	461	0.2000	2.20
94	LLYSRFWHK	665	0.2000	2.20
95	YRRLVNQGY	687	0.2000	2.20
96	VPRAAVEPL	858	0.2000	2.20

Rank	Sequence	At Position	Score	% of Highest Score
ALLELE: DRB1_1114		Threshold for 3 % with score: 1.3		Highest Score achievable by any peptide: 8.4
1	YRLVYRADS	229	4.0000	47.62
2	YRRAIAAKS	386	3.6000	42.86
3	WMMRITAYA	275	3.5000	41.67
4	VVGAYRFLQ	782	3.4000	40.48
5	YRFLQRVWR	786	3.3000	39.29
6	MVGRNVLHA	104	3.1000	36.90
7	FRRQLGRLG	144	3.0000	35.71
8	YTNHLTKKH	846	2.8800	34.29
9	FRMVGRNVL	102	2.8000	33.33
10	WIFLQIYNA	174	2.8000	33.33
11	VRGRVVVAA	919	2.7000	32.14
12	FRKRLRQWM	268	2.6000	30.95
13	LRYTDPHNS	615	2.4000	28.57
14	FPVFRKRLR	265	2.3000	27.38
15	YFRMVGRNV	101	2.1000	25.00
16	VVNFRRQLG	141	2.0000	23.81
17	VALFSARAA	314	2.0000	23.81
18	WATKDVVGA	777	1.9000	22.62
19	WARLGTFNV	42	1.8000	21.43
20	VFRKRLRQW	267	1.7000	20.24

21	VKTMQRNWI	299	1.7000	20.24
22	WLFARQRYW	519	1.7000	20.24
23	YAYTDARGS	699	1.6000	19.05
24	VQMLAPLAP	867	1.6000	19.05
25	IVVAGRLVN	957	1.6000	19.05
26	LNGMSVPAA	486	1.5000	17.86
27	FYRWTQWIF	168	1.4000	16.67
28	LVQMLAPLA	866	1.4000	16.67
29	FKLRDWLFA	514	1.3000	15.48
30	LHLLYSRFW	663	1.3000	15.48
31	YRRLVNQGY	687	1.3000	15.48
32	FQEFGKIGK	733	1.3000	15.48
33	WLR LGNTTS	882	1.3000	15.48
34	LERQESREK	396	1.2000	14.29
35	YARYFRMVG	98	1.1000	13.10
36	LRQWMMRIT	272	1.0000	11.90
37	LRALHRTIV	817	1.0000	11.90
38	VQVNGKVRG	913	1.0000	11.90
39	YRYTAELAA	24	0.9000	10.71
40	FNVPNPVGS	48	0.9000	10.71
41	MQRNWIGRS	302	0.9000	10.71
42	LGSYAINPA	409	0.9000	10.71
43	LQIYNAWFD	177	0.8000	9.52
44	VQDMFPYPS	72	0.7000	8.33
45	IEVFTTRPD	331	0.7000	8.33
46	LQRVWRLVV	789	0.7000	8.33
47	YELRYTDPH	613	0.6800	8.10
48	LVDELVAAS	355	0.6000	7.14
49	LRNNTATAK	834	0.6000	7.14
50	FGHDSRRSF	153	0.5000	5.95
51	LAPLAPHIA	870	0.5000	5.95
52	IAAYRRAIA	383	0.4000	4.76
53	WMGPRPAEH	635	0.3800	4.52
54	WQENWARLG	38	0.3000	3.57

55	LVNWCPGLG	238	0.3000	3.57
56	FIADYVLAG	425	0.3000	3.57
57	LVNQGYIQA	690	0.3000	3.57
58	YVPAEQVIE	708	0.3000	3.57
59	FLQRVWRLV	788	0.3000	3.57
60	VMPQWAGSS	603	0.2000	2.38
61	LAGATPRKV	948	0.2000	2.38
62	VLHALGFDA	109	0.1000	1.19
63	WIGRSTGAV	306	0.1000	1.19
64	VNPLWTYGG	368	0.1000	1.19
65	VPGHDQRDW	442	0.1000	1.19
66	FARAFGLPI	452	0.1000	1.19
67	YSRFWHKVL	667	0.1000	1.19
68	VNFRRQLGR	142	-0.1000	0
69	YRADSLVNW	233	-0.1000	0
70	FGLPIVEVI	456	-0.1000	0
71	FWHKVLYDL	670	-0.1000	0
72	FAALRNNTA	831	-0.1000	0
73	VGRNVLHAL	105	-0.2000	0
74	WPEQVKTMQ	295	-0.2000	0
75	IFIADYVLA	424	-0.2000	0
76	YLNQMSVPA	485	-0.2000	0
77	LFARQRYWG	520	-0.2000	0
78	LHRTIVGVS	820	-0.2000	0
79	YLVDETVEY	903	-0.2000	0
80	VLTDEKVQA	938	-0.2000	0
81	VWRLVVDEH	792	-0.2200	0
82	LGTFNVPNP	45	-0.3000	0
83	YLVLAPEHD	346	-0.3000	0
84	LRDWLFARQ	516	-0.3000	0
85	VLYDLGHVS	674	-0.3000	0
86	LFVQDMFPY	70	-0.4000	0
87	IGKSLKNSV	739	-0.4000	0
88	LRLGNTTSL	883	-0.4000	0

89	VNGKVRGRV	915	-0.4000	0
90	VYRADSLVN	232	-0.5000	0

ALLELE: DRB1_1120	Threshold for 3 % with score: 2.1	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRFLQRVWR	786	4.8000	54.55
2	FRRQLGRLG	144	4.4000	50.00
3	YRLVYRADS	229	4.4000	50.00
4	FRKRLRQWM	268	4.1000	46.59
5	YRRAIAAKS	386	4.0000	45.45
6	FPVFRKRLR	265	3.8000	43.18
7	FRMVGRNVL	102	3.7600	42.73
8	WMMRITAYA	275	3.5000	39.77
9	VVNFRRQLG	141	3.4000	38.64
10	FYRWTQWIF	168	3.3000	37.50
11	YFRMVGRNV	101	3.1000	35.23
12	MVGRNVLHA	104	3.1000	35.23
13	WARLGTFFNV	42	2.8000	31.82
14	WIFLQIYNA	174	2.8000	31.82
15	LRYTDPHNS	615	2.8000	31.82
16	VVGAYRFLQ	782	2.7000	30.68
17	VRGRVVVAA	919	2.7000	30.68
18	VKTMQRNWI	299	2.6000	29.55
19	YRRLVNQGY	687	2.6000	29.55
20	VQMLAPLAP	867	2.6000	29.55
21	YARYFRMVG	98	2.5000	28.41
22	FGHDSRRSF	153	2.4000	27.27
23	VQVNGKVRG	913	2.4000	27.27
24	IVVAGRLVN	957	2.4000	27.27
25	YTNHLTKKH	846	2.3000	26.14
26	VALFSARAA	314	2.0000	22.73
27	YAYTDARGS	699	2.0000	22.73

28	LRALHRTIV	817	2.0000	22.73
29	LQIYNAWFD	177	1.9000	21.59
30	WATKDVVGA	777	1.9000	21.59
31	IEVFTTRPD	331	1.8000	20.45
32	WQENWARLG	38	1.7000	19.32
33	LVNWCPGLG	238	1.7000	19.32
34	VFRKRLRQW	267	1.7000	19.32
35	LRQWMMRIT	272	1.7000	19.32
36	FIADYVLAG	425	1.7000	19.32
37	WLFARQRYW	519	1.7000	19.32
38	YVPAEQVIE	708	1.7000	19.32
39	LQRVWRLVV	789	1.7000	19.32
40	WLR LGNTTS	882	1.7000	19.32
41	YIATDVYAR	92	1.5000	17.05
42	VNPLWTYGG	368	1.5000	17.05
43	LNGMSVPAA	486	1.5000	17.05
44	VNFRRLGR	142	1.4000	15.91
45	YAINPANGE	412	1.4000	15.91
46	FQEF GKIGK	733	1.4000	15.91
47	LVQMLAPLA	866	1.4000	15.91
48	FNVPNPVGS	48	1.3000	14.77
49	MQRNWIGRS	302	1.3000	14.77
50	LERQESREK	396	1.3000	14.77
51	FKLRDWLFA	514	1.3000	14.77
52	LHLLYSRFW	663	1.3000	14.77
53	FLQRVWRLV	788	1.3000	14.77
54	LFARQRYWG	520	1.2000	13.64
55	LAGATPRKV	948	1.2000	13.64
56	VQDMFPYPS	72	1.1000	12.50
57	WIGRSTGAV	306	1.1000	12.50
58	YLVD ETV EY	903	1.1000	12.50
59	YSRFWHKVL	667	1.0600	12.05
60	LVDELVAAS	355	1.0000	11.36
61	FARAFGLPI	452	1.0000	11.36

62	VAGRLVNLV	959	1.0000	11.36
63	LVLAPEHDL	347	0.9600	10.91
64	YRYTAELAA	24	0.9000	10.23
65	LFVQDMFPY	70	0.9000	10.23
66	LGSYAINPA	409	0.9000	10.23
67	FWHKVLYDL	670	0.8600	9.77
68	YLVLAPEHD	346	0.8000	9.09
69	FGLPIVEVI	456	0.8000	9.09
70	YGADTLRVY	756	0.8000	9.09
71	VGRNVLHAL	105	0.7600	8.64
72	LGTFNVPNP	45	0.7000	7.95
73	FLQIYNAWF	176	0.7000	7.95
74	MRITAYADR	277	0.7000	7.95
75	LRVYEMSMG	761	0.7000	7.95
76	LRNNTATAK	834	0.7000	7.95
77	YVLAGYGTG	429	0.6000	6.82
78	VMPQWAGSS	603	0.6000	6.82
79	IGKSLKNSV	739	0.6000	6.82
80	VNGKVRGRV	915	0.6000	6.82
81	LRLGNTTSL	883	0.5600	6.36
82	VGSLAPPDG	54	0.5000	5.68
83	WVHVDLDLG	583	0.5000	5.68
84	LAPLAPHIA	870	0.5000	5.68
85	VIVVAGRLV	956	0.5000	5.68
86	IAAYRRAIA	383	0.4000	4.55
87	LVNSDYLNG	480	0.4000	4.55
88	WTQWIFLQI	171	0.3000	3.41
89	VYRADSLVN	232	0.3000	3.41
90	LVNQGYIQA	690	0.3000	3.41
91	YIQAYAYTD	695	0.3000	3.41
92	VYARYFRMV	97	0.2000	2.27
93	LPIVEVIAG	458	0.2000	2.27
94	IERGDRFVY	715	0.2000	2.27
95	LHRTIVGVS	820	0.2000	2.27

96	IEFKLRDWL	512	0.1600	1.82
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ALLELE: DRB1_1121	Threshold for 3 % with score: 1.8	Highest Score achievable by any peptide: 8.4
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Rank	Sequence	At Position	Score	% of Highest Score
1	VVGAYRFLQ	782	4.4000	52.38
2	MVGRNVLHA	104	4.1000	48.81
3	VRGRVVVAA	919	3.7000	44.05
4	LRYTDPHNS	615	3.4000	40.48
5	VVNFRRQLG	141	3.0000	35.71
6	YRLVYRADS	229	3.0000	35.71
7	VALFSARAA	314	3.0000	35.71
8	VFRKRLRQW	267	2.7000	32.14
9	VKTMQRNWI	299	2.7000	32.14
10	YRRAIAAKS	386	2.6000	30.95
11	VQMLAPLAP	867	2.6000	30.95
12	IVVAGRLVN	957	2.6000	30.95
13	WMMRITAYA	275	2.5000	29.76
14	LNGMSVPAA	486	2.5000	29.76
15	LVQMLAPLA	866	2.4000	28.57
16	LHLLYSRFW	663	2.3000	27.38
17	YRFLQRVWR	786	2.3000	27.38
18	LERQESREK	396	2.2000	26.19
19	FRRQLGRLG	144	2.0000	23.81
20	LRQWMMRIT	272	2.0000	23.81
21	LRALHRTIV	817	2.0000	23.81
22	VQVNGKVRG	913	2.0000	23.81
23	MQRNWIGRS	302	1.9000	22.62
24	LGSYAINPA	409	1.9000	22.62
25	YTNHLTKKH	846	1.8800	22.38
26	FRMVGRNVL	102	1.8000	21.43
27	WIFLQIYNA	174	1.8000	21.43
28	LQIYNAWFD	177	1.8000	21.43

29	VQDMFPYPS	72	1.7000	20.24
30	IEVFTTRPD	331	1.7000	20.24
31	LQRVWRLVV	789	1.7000	20.24
32	FRKRLRQWM	268	1.6000	19.05
33	LVDELVAAS	355	1.6000	19.05
34	LRNNTATAK	834	1.6000	19.05
35	LAPLAPHIA	870	1.5000	17.86
36	IAAYRRAIA	383	1.4000	16.67
37	LVNWCPGLG	238	1.3000	15.48
38	FPVFRKRLR	265	1.3000	15.48
39	LVNQGYIQA	690	1.3000	15.48
40	VMPQWAGSS	603	1.2000	14.29
41	LAGATPRKV	948	1.2000	14.29
42	YFRMVGRNV	101	1.1000	13.10
43	VLHALGFDA	109	1.1000	13.10
44	VNPLWTYGG	368	1.1000	13.10
45	VPGHDQRDW	442	1.1000	13.10
46	LVLAPEHDL	347	1.0000	11.90
47	VAGRLVNLV	959	1.0000	11.90
48	VNFRRQLGR	142	0.9000	10.71
49	WATKDVVGA	777	0.9000	10.71
50	WARLGTENV	42	0.8000	9.52
51	VGRNVLHAL	105	0.8000	9.52
52	IFIADYVLA	424	0.8000	9.52
53	LFARQRYWG	520	0.8000	9.52
54	LHRTIVGVS	820	0.8000	9.52
55	VLTDEKVQA	938	0.8000	9.52
56	VWRLVVDEH	792	0.7800	9.29
57	LGTFNVPNP	45	0.7000	8.33
58	LRDWLFARQ	516	0.7000	8.33
59	WLFARQRYW	519	0.7000	8.33
60	VLYDLGHVS	674	0.7000	8.33
61	LFVQDMFPY	70	0.6000	7.14
62	YAYTDARGS	699	0.6000	7.14

63	IGKSLKNSV	739	0.6000	7.14
64	LRLGNTTSL	883	0.6000	7.14
65	VNGKVRGRV	915	0.6000	7.14
66	VYRADSLVN	232	0.5000	5.95
67	LYDLGHVSS	675	0.5000	5.95
68	VEPLVQMLA	863	0.5000	5.95
69	VIVVAGRLV	956	0.5000	5.95
70	FYRWTQWIF	168	0.4000	4.76
71	IMAVPGHDQ	439	0.3000	3.57
72	FKLRDWLFA	514	0.3000	3.57
73	YRRLVNQGY	687	0.3000	3.57
74	VEVFQEF GK	730	0.3000	3.57
75	FQEF GKIGK	733	0.3000	3.57
76	LRVYEMSMG	761	0.3000	3.57
77	WLRLGNTTS	882	0.3000	3.57
78	LGNTTSLAH	885	0.2800	3.33
79	VYARYFRMV	97	0.2000	2.38
80	MRITAYADR	277	0.2000	2.38
81	IEFKLRDWL	512	0.2000	2.38
82	VGSLAPPDG	54	0.1000	1.19
83	YARYFRMVG	98	0.1000	1.19
84	IFLQIYNAW	175	0.1000	1.19
85	YRYTAELAA	24	-0.1000	0
86	FNVPNPVGS	48	-0.1000	0
87	IGRSTGAVA	307	-0.1000	0
88	LKPYSRDTN	594	-0.1000	0
89	LLYSRFWHK	665	-0.1000	0
90	IERGDRFVY	715	-0.1000	0
91	LPIVEVIAG	458	-0.2000	0
92	VPAAKRAIV	491	-0.2000	0
93	LESAGRGRA	502	-0.2000	0
94	IEYTNHLTK	844	-0.2000	0

ALLELE: DRB1_1128	Threshold for 3 % with score: 2.15	Highest Score achievable by any peptide: 8.7
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRLVYRADS	229	5.7000	65.52
2	YRFLQRVWR	786	5.0000	57.47
3	VQMLAPLAP	867	4.4000	50.57
4	LQRVWRLVV	789	4.1000	47.13
5	YRRAIAAKS	386	4.0000	45.98
6	FRMVGRNVL	102	3.9600	45.52
7	IVVAGRLVN	957	3.5000	40.23
8	MVGRNVLHA	104	3.3000	37.93
9	WIFLQIYNA	174	3.3000	37.93
10	LPIVEVIAG	458	2.8000	32.18
11	LRYTDPHNS	615	2.8000	32.18
12	YARYFRMVG	98	2.7000	31.03
13	WMMRITAYA	275	2.6000	29.89
14	YRRLVNQGY	687	2.6000	29.89
15	YRYTAELAA	24	2.5000	28.74
16	WARLGTFFNV	42	2.5000	28.74
17	FRKRLRQWM	268	2.5000	28.74
18	FIADYVLAG	425	2.5000	28.74
19	VVNFRRQLG	141	2.3000	26.44
20	MQRNWIGRS	302	2.3000	26.44
21	FQEFGKIGK	733	2.3000	26.44
22	LRALHRTIV	817	2.3000	26.44
23	FLQIYNAWF	176	2.2000	25.29
24	LNGMSVPAA	486	2.1500	24.71
25	FARAFGLPI	452	2.1000	24.14
26	LVQMLAPLA	866	2.0500	23.56
27	LVNWCPGLG	238	2.0000	22.99
28	VNPLWTYGG	368	2.0000	22.99
29	WLRLGNTTS	882	2.0000	22.99
30	YIATDVYAR	92	1.8000	20.69
31	FRRQLGRLG	144	1.8000	20.69

32	FPVFRKRLR	265	1.8000	20.69
33	LHRTIVGVS	820	1.8000	20.69
34	VQVNGKVRG	913	1.8000	20.69
35	YFRMVGRNV	101	1.7000	19.54
36	FYRWTQWIF	168	1.7000	19.54
37	VKTMQRNWI	299	1.7000	19.54
38	YVLAGYGTG	429	1.7000	19.54
39	VVGAYRFLQ	782	1.7000	19.54
40	VGSLAPPDG	54	1.6500	18.97
41	VNFRRQLGR	142	1.6000	18.39
42	FKLRDWLFA	514	1.5000	17.24
43	VEPLVQMLA	863	1.5000	17.24
44	VYRADSLVN	232	1.4000	16.09
45	LVNSDY LNG	480	1.4000	16.09
46	WIGRSTGAV	306	1.3000	14.94
47	VRGRVVVAA	919	1.3000	14.94
48	WAKLTAGER	214	1.2000	13.79
49	MRITAYADR	277	1.2000	13.79
50	YLVLAPEHD	346	1.2000	13.79
51	YVPAEQVIE	708	1.2000	13.79
52	FGKIGKSLK	736	1.2000	13.79
53	VQDMFPYPS	72	1.1000	12.64
54	YGTGAIMAV	434	1.1000	12.64
55	FLGSYAINP	408	1.0000	11.49
56	YRWTQWIFL	169	0.9600	11.03
57	LHVGHPLGY	84	0.9000	10.34
58	YAYTDARGS	699	0.9000	10.34
59	IDTLRALHR	814	0.8000	9.20
60	LGTFNVPNP	45	0.7500	8.62
61	MMRITAYAD	276	0.7000	8.05
62	VMPQWAGSS	603	0.7000	8.05
63	LAPLAPHIA	870	0.7000	8.05
64	FNVPNPVGS	48	0.6000	6.90
65	WTQWIFLQI	171	0.6000	6.90

66	WVHVLDLGLG	583	0.6000	6.90
67	LVNQGYIQA	690	0.6000	6.90
68	FGHDSRRSF	153	0.5000	5.75
69	IEYTNHLTK	844	0.5000	5.75
70	LVLAPEHDL	347	0.4600	5.29
71	YSRFWHKVL	667	0.4600	5.29
72	LVDELVAAS	355	0.4000	4.60
73	LHLLYSRFW	663	0.4000	4.60
74	VNGKVRGRV	915	0.4000	4.60
75	FGLPIVEVI	456	0.3000	3.45
76	LGNTTSLAH	885	0.3000	3.45
77	YLVDETVEY	903	0.3000	3.45
78	YWMGPRPAE	634	0.2500	2.87
79	YAINPANGE	412	0.2000	2.30
80	LRNNTATAK	834	0.2000	2.30
81	VIVVAGRLV	956	0.2000	2.30
82	VGRNVLHAL	105	0.1600	1.84
83	VNWCPGLGT	239	0.1000	1.15
84	YTG DGILVN	474	0.1000	1.15
85	WLFARQRYW	519	0.1000	1.15
86	LFARQRYWG	520	0.1000	1.15
87	LYDLGHVSS	675	0.1000	1.15
88	YIQAYAYTD	695	0.1000	1.15
89	WATKDVVGA	777	0.1000	1.15
90	LFGATYLVL	341	0.0600	0.69
91	LVAASWPAG	359	0.0500	0.57

ALLELE: DRB1_1301	Threshold for 3 % with score: 2.6	Highest Score achievable by any peptide: 8.8		
Rank	Sequence	At Position	Score	% of Highest Score
1	VVNFRRQLG	141	4.4000	50.00
2	MVGRNVLHA	104	4.1000	46.59
3	LRYTDPHNS	615	3.8000	43.18

4	YRFLQRVWR	786	3.8000	43.18
5	VVGAYRFLQ	782	3.7000	42.05
6	VRGRVVVAA	919	3.7000	42.05
7	VKTMQRNWI	299	3.6000	40.91
8	VQMLAPLAP	867	3.6000	40.91
9	FRRQLGRLG	144	3.4000	38.64
10	YRLVYRADS	229	3.4000	38.64
11	VQVNGKVRG	913	3.4000	38.64
12	IVVAGRLVN	957	3.4000	38.64
13	FRKRLRQWM	268	3.1000	35.23
14	VALFSARAA	314	3.0000	34.09
15	YRRAIAAKS	386	3.0000	34.09
16	LRALHRTIV	817	3.0000	34.09
17	LQIYNWFD	177	2.9000	32.95
18	FPVFRKRLR	265	2.8000	31.82
19	IEVFTTRPD	331	2.8000	31.82
20	FRMVGRNVL	102	2.7600	31.36
21	LVNWCPGLG	238	2.7000	30.68
22	VFRKRLRQW	267	2.7000	30.68
23	LRQWMMRIT	272	2.7000	30.68
24	LQRVWRLVV	789	2.7000	30.68
25	WMMRITAYA	275	2.5000	28.41
26	VNPLWTYGG	368	2.5000	28.41
27	LNGMSVPAA	486	2.5000	28.41
28	VNFRRQLGR	142	2.4000	27.27
29	LVQMLAPLA	866	2.4000	27.27
30	FYRWTQWIF	168	2.3000	26.14
31	MQRNWIGRS	302	2.3000	26.14
32	LERQESREK	396	2.3000	26.14
33	LHLLYSRFW	663	2.3000	26.14
34	LFARQRYWG	520	2.2000	25.00
35	LAGATPRKV	948	2.2000	25.00
36	VQDMFPYPS	72	2.1000	23.86
37	YFRMVGRNV	101	2.1000	23.86

38	LVDELVAAS	355	2.0000	22.73
39	VAGRLVNLV	959	2.0000	22.73
40	LVLAPEHDL	347	1.9600	22.27
41	LFVQDMFPY	70	1.9000	21.59
42	LGSYAINPA	409	1.9000	21.59
43	WARLGTFFNV	42	1.8000	20.45
44	WIFLQIYNA	174	1.8000	20.45
45	VGRNVLHAL	105	1.7600	20.00
46	LGTFNVPNP	45	1.7000	19.32
47	MRITAYADR	277	1.7000	19.32
48	LRVYEMSMG	761	1.7000	19.32
49	LRNNTATAK	834	1.7000	19.32
50	VMPQWAGSS	603	1.6000	18.18
51	YRRLVNQGY	687	1.6000	18.18
52	IGKSLKNSV	739	1.6000	18.18
53	VNGKVRGRV	915	1.6000	18.18
54	LRLGNTTSL	883	1.5600	17.73
55	VGSLAPPDG	54	1.5000	17.05
56	YARYFRMVG	98	1.5000	17.05
57	LAPLAPHIA	870	1.5000	17.05
58	VIVVAGRLV	956	1.5000	17.05
59	FGHDSRRSF	153	1.4000	15.91
60	IAAYRRAIA	383	1.4000	15.91
61	LVNSDYLNG	480	1.4000	15.91
62	VYRADSLVN	232	1.3000	14.77
63	LVNQGYYQA	690	1.3000	14.77
64	YTNHLTKKH	846	1.3000	14.77
65	VYARYFRMV	97	1.2000	13.64
66	LPIVEVIAG	458	1.2000	13.64
67	IERGDRFVY	715	1.2000	13.64
68	LHRTIVGVS	820	1.2000	13.64
69	IEFKLRDWL	512	1.1600	13.18
70	VLHALGFDA	109	1.1000	12.50
71	VPGHDQRDW	442	1.1000	12.50

72	VLYDLGHVS	674	1.1000	12.50
73	VVAADTDEE	924	1.1000	12.50
74	LHVGHPLGY	84	1.0000	11.36
75	VNSDYLNMG	481	1.0000	11.36
76	YAYTDARGS	699	1.0000	11.36
77	LYDLGHVSS	675	0.9000	10.23
78	VSSREPYRR	681	0.9000	10.23
79	WATKDVVGA	777	0.9000	10.23
80	IFIADYVLA	424	0.8000	9.09
81	VPAAKRAIV	491	0.8000	9.09
82	VLTEK VQA	938	0.8000	9.09
83	LAPHIAEEL	873	0.7600	8.64
84	WQENWARLG	38	0.7000	7.95
85	FIADYVLAG	425	0.7000	7.95
86	WLFARQRYW	519	0.7000	7.95
87	LKPYSRDTN	594	0.7000	7.95
88	YVPAEQVIE	708	0.7000	7.95
89	WLRLGNTTS	882	0.7000	7.95
90	VVAGRLVNL	958	0.6600	7.50
91	LVAASWPAG	359	0.6000	6.82
92	VPIFIADYV	422	0.6000	6.82
93	VELPDVPDY	551	0.6000	6.82
94	LGHVSSREP	678	0.6000	6.82
95	LTKKHRDAV	850	0.6000	6.82
96	VGGAEHAVL	655	0.5600	6.36

ALLELE: DRB1_1302	Threshold for 3 % with score: 2.1	Highest Score achievable by any peptide: 8.8		
Rank	Sequence	At Position	Score	% of Highest Score
1	YRFLQRVWR	786	4.8000	54.55
2	FRRQLGRLG	144	4.4000	50.00
3	YRLVYRADS	229	4.4000	50.00
4	FRKRLRQWM	268	4.1000	46.59

5	YRRAIAAKS	386	4.0000	45.45
6	FPVFRKRLR	265	3.8000	43.18
7	FRMVGRNVL	102	3.7600	42.73
8	WMMRITAYA	275	3.5000	39.77
9	VVNFRRQLG	141	3.4000	38.64
10	FYRWTQWIF	168	3.3000	37.50
11	YFRMVGRNV	101	3.1000	35.23
12	MVGRNVLHA	104	3.1000	35.23
13	WARLGTFFNV	42	2.8000	31.82
14	WIFLQIYNA	174	2.8000	31.82
15	LRYTDPHNS	615	2.8000	31.82
16	VVGAYRFLQ	782	2.7000	30.68
17	VRGRVVVAA	919	2.7000	30.68
18	VKTMQRNWI	299	2.6000	29.55
19	YRRLVNQGY	687	2.6000	29.55
20	VQMLAPLAP	867	2.6000	29.55
21	YARYFRMVG	98	2.5000	28.41
22	FGHDSRRSF	153	2.4000	27.27
23	VQVNGKVRG	913	2.4000	27.27
24	IVVAGRLVN	957	2.4000	27.27
25	YTNHLTKKH	846	2.3000	26.14
26	VALFSARAA	314	2.0000	22.73
27	YAYTDARGS	699	2.0000	22.73
28	LRALHRTIV	817	2.0000	22.73
29	LQIYNAWFD	177	1.9000	21.59
30	WATKDVVGA	777	1.9000	21.59
31	IEVFTTRPD	331	1.8000	20.45
32	WQENWARLG	38	1.7000	19.32
33	LVNWCPGLG	238	1.7000	19.32
34	VFRKRLRQW	267	1.7000	19.32
35	LRQWMMRIT	272	1.7000	19.32
36	FIADYVLAG	425	1.7000	19.32
37	WLFARQRYW	519	1.7000	19.32
38	YVPAEQVIE	708	1.7000	19.32

39	LQRVWRLVV	789	1.7000	19.32
40	WLRLGNTTS	882	1.7000	19.32
41	YIATDVYAR	92	1.5000	17.05
42	VNPLWTYGG	368	1.5000	17.05
43	LNGMSVPAA	486	1.5000	17.05
44	VNFRRQLGR	142	1.4000	15.91
45	YAINPANGE	412	1.4000	15.91
46	FQEF GKIGK	733	1.4000	15.91
47	LVQMLAPLA	866	1.4000	15.91
48	FNVPNPVGS	48	1.3000	14.77
49	MQRNWIGRS	302	1.3000	14.77
50	LERQESREK	396	1.3000	14.77
51	FKLRDWLFA	514	1.3000	14.77
52	LHLLYSRFW	663	1.3000	14.77
53	FLQRVWRLV	788	1.3000	14.77
54	LFARQRYWG	520	1.2000	13.64
55	LAGATPRKV	948	1.2000	13.64
56	VQDMFPYPS	72	1.1000	12.50
57	WIGRSTGAV	306	1.1000	12.50
58	YLVDETVEY	903	1.1000	12.50
59	YSRFWHKVL	667	1.0600	12.05
60	LVDELVAAS	355	1.0000	11.36
61	FARAFGLPI	452	1.0000	11.36
62	VAGRLVNLV	959	1.0000	11.36
63	LVLAPEHDL	347	0.9600	10.91
64	YRYTAELAA	24	0.9000	10.23
65	LFVQDMFPY	70	0.9000	10.23
66	LGSYAINPA	409	0.9000	10.23
67	FWHKVLYDL	670	0.8600	9.77
68	YLVLAPEHD	346	0.8000	9.09
69	FGLPIVEVI	456	0.8000	9.09
70	YGADTLRVY	756	0.8000	9.09
71	VGRNVLHAL	105	0.7600	8.64
72	LGTFNVPNP	45	0.7000	7.95

73	FLQIYNAWF	176	0.7000	7.95
74	MRITAYADR	277	0.7000	7.95
75	LRVYEMSMG	761	0.7000	7.95
76	LRNNTATAK	834	0.7000	7.95
77	YVLAGYGTG	429	0.6000	6.82
78	VMPQWAGSS	603	0.6000	6.82
79	IGKSLKNSV	739	0.6000	6.82
80	VNGKVRGRV	915	0.6000	6.82
81	LRLGNTTSL	883	0.5600	6.36
82	VGSLAPPDG	54	0.5000	5.68
83	WVHVDLDLG	583	0.5000	5.68
84	LAPLAPHIA	870	0.5000	5.68
85	VIVVAGRLV	956	0.5000	5.68
86	IAAYRRAIA	383	0.4000	4.55
87	LVNSDYLNG	480	0.4000	4.55
88	WTQWIFLQI	171	0.3000	3.41
89	VYRADSLVN	232	0.3000	3.41
90	LVNQGYIQA	690	0.3000	3.41
91	YIQAYAYTD	695	0.3000	3.41
92	VYARYFRMV	97	0.2000	2.27
93	LPIVEVIAG	458	0.2000	2.27
94	IERGDRFVY	715	0.2000	2.27
95	LHRTIVGVS	820	0.2000	2.27
96	IEFKLRDWL	512	0.1600	1.82

ALLELE: DRB1_1304	Threshold for 3 % with score: 2.6	Highest Score achievable by any peptide: 9
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Rank	Sequence	At Position	Score	% of Highest Score
1	VVGAYRFLQ	782	5.2000	57.78
2	IVVAGRLVN	957	4.6000	51.11
3	LQIYNAWFD	177	4.5000	50.00
4	IEVFTTRPD	331	4.4000	48.89
5	VVNFRRQLG	141	4.3000	47.78

6	MVGRNVLHA	104	4.1000	45.56
7	VRGRVVVAA	919	3.7000	41.11
8	VFRKRLRQW	267	3.6000	40.00
9	LRYTDPHNS	615	3.4000	37.78
10	FRRQLGRLG	144	3.3000	36.67
11	VQVNGKV RG	913	3.3000	36.67
12	LHLLYSRFW	663	3.2000	35.56
13	YTNHLTKKH	846	3.1000	34.44
14	YRLVYRADS	229	3.0000	33.33
15	VALFSARAA	314	3.0000	33.33
16	VQMLAPLAP	867	3.0000	33.33
17	LRQWMMRIT	272	2.9000	32.22
18	VKTMQRNWI	299	2.9000	32.22
19	FRMVGRNVL	102	2.8000	31.11
20	FRKRLRQWM	268	2.7000	30.00
21	VVAADTDEE	924	2.7000	30.00
22	LVNWCPGLG	238	2.6000	28.89
23	YRRAIAAKS	386	2.6000	28.89
24	VYRADSLVN	232	2.5000	27.78
25	WMMRITAYA	275	2.5000	27.78
26	LNGMSVPAA	486	2.5000	27.78
27	VNPLWTYGG	368	2.4000	26.67
28	LVQMLAPLA	866	2.4000	26.67
29	YVPAEQVIE	708	2.3000	25.56
30	YRFLQRVWR	786	2.3000	25.56
31	LRALHRTIV	817	2.3000	25.56
32	LFARQRYWG	520	2.1000	23.33
33	MMRITAYAD	276	2.0000	22.22
34	LFSARAASD	316	2.0000	22.22
35	LVLAPEHDL	347	2.0000	22.22
36	YAINPANGE	412	2.0000	22.22
37	VPGHDQRDW	442	2.0000	22.22
38	LQRVWRLVV	789	2.0000	22.22
39	VWRLVVDEH	792	2.0000	22.22

40	MQRNWIGRS	302	1.9000	21.11
41	LGSYAINPA	409	1.9000	21.11
42	LKPYSRDTN	594	1.9000	21.11
43	VGRNVLHAL	105	1.8000	20.00
44	WIFLQIYNA	174	1.8000	20.00
45	LFVQDMFPY	70	1.7000	18.89
46	VQDMFPYPS	72	1.7000	18.89
47	LKNSVSPDE	743	1.7000	18.89
48	LKAAVLTDE	934	1.7000	18.89
49	LVDELVAAS	355	1.6000	17.78
50	WLFARQRYW	519	1.6000	17.78
51	LRVYEMSMG	761	1.6000	17.78
52	LRLGNTTSL	883	1.6000	17.78
53	LERQESREK	396	1.5000	16.67
54	LRDWLFARQ	516	1.5000	16.67
55	LVVDEHTGE	795	1.5000	16.67
56	LAPLAPHIA	870	1.5000	16.67
57	LGNTTSLAH	885	1.5000	16.67
58	LAGATPRKV	948	1.5000	16.67
59	VGSLAPPDG	54	1.4000	15.56
60	YARYFRMVG	98	1.4000	15.56
61	YFRMVGRNV	101	1.4000	15.56
62	YLVLAPEHD	346	1.4000	15.56
63	IAAYRRAIA	383	1.4000	15.56
64	YRRLVNQGY	687	1.4000	15.56
65	FYRWTQWIF	168	1.3000	14.44
66	FPVFRKRLR	265	1.3000	14.44
67	LVNSDYLNG	480	1.3000	14.44
68	LVNQGYIQA	690	1.3000	14.44
69	VAGRLVNLV	959	1.3000	14.44
70	IEFKLRDWL	512	1.2000	13.33
71	VMPQWAGSS	603	1.2000	13.33
72	WARLGTFNV	42	1.1000	12.22
73	LGTFNVPNP	45	1.1000	12.22

74	VLHALGFDA	109	1.1000	12.22
75	IMAVPGHDQ	439	1.1000	12.22
76	LPIVEVIAG	458	1.1000	12.22
77	IFLQIYNAW	175	1.0000	11.11
78	LGTVLANEE	245	1.0000	11.11
79	IERGDRFVY	715	1.0000	11.11
80	VNFRRQLGR	142	0.9000	10.00
81	YELRYTDPH	613	0.9000	10.00
82	YIQAYAYTD	695	0.9000	10.00
83	IGKSLKNSV	739	0.9000	10.00
84	WATKDVVGA	777	0.9000	10.00
85	LRNNTATAK	834	0.9000	10.00
86	VNGKVRGRV	915	0.9000	10.00
87	LHVGHPLGY	84	0.8000	8.89
88	IFIADYVLA	424	0.8000	8.89
89	VYDSDGRPH	534	0.8000	8.89
90	LHRTIVGVS	820	0.8000	8.89
91	LAPHIAEEL	873	0.8000	8.89
92	VLTDEKVQA	938	0.8000	8.89
93	VIVVAGRLV	956	0.8000	8.89
94	LANEEVTAD	249	0.7000	7.78
95	VLYDLGHVS	674	0.7000	7.78
96	FVYPPGDGE	721	0.7000	7.78

ALLELE: DRB1_1305	Threshold for 3 % with score: 2.2	Highest Score achievable by any peptide: 8.7
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRLVYRADS	229	5.7000	65.52
2	YRFLQRVWR	786	5.0000	57.47
3	VQMLAPLAP	867	4.4000	50.57
4	LQRVWRLVV	789	4.1000	47.13
5	YRRAIAAKS	386	4.0000	45.98
6	FRMVGRNVL	102	3.9600	45.52

7	IVVAGRLVN	957	3.5000	40.23
8	MVGRNVLHA	104	3.3000	37.93
9	WIFLQIYNA	174	3.3000	37.93
10	LPIVEVIAG	458	2.8000	32.18
11	LRYTDPHNS	615	2.8000	32.18
12	YARYFRMVG	98	2.7000	31.03
13	WMMRITAYA	275	2.6000	29.89
14	YRRLVNQGY	687	2.6000	29.89
15	YRYTAEALAA	24	2.5000	28.74
16	WARLGTFFNV	42	2.5000	28.74
17	FRKRLRQWM	268	2.5000	28.74
18	FIADYVLAG	425	2.5000	28.74
19	VVNFRRQLG	141	2.3000	26.44
20	MQRNWIGRS	302	2.3000	26.44
21	FQEFQKIGK	733	2.3000	26.44
22	LRALHRTIV	817	2.3000	26.44
23	FLQIYNAWF	176	2.2000	25.29
24	LNGMSVPAA	486	2.1500	24.71
25	FARAFGLPI	452	2.1000	24.14
26	LVQMLAPLA	866	2.0500	23.56
27	LVNWCPGLG	238	2.0000	22.99
28	VNPLWTYGG	368	2.0000	22.99
29	WLRLGNTTS	882	2.0000	22.99
30	YIATDVYAR	92	1.8000	20.69
31	FRRQLGRLG	144	1.8000	20.69
32	FPVFRKRLR	265	1.8000	20.69
33	LHRTIVGVS	820	1.8000	20.69
34	VQVNGKVRG	913	1.8000	20.69
35	YFRMVGRNV	101	1.7000	19.54
36	FYRWTQWIF	168	1.7000	19.54
37	VKTMQRNWI	299	1.7000	19.54
38	YVLAGYGTG	429	1.7000	19.54
39	VVGAYRFLQ	782	1.7000	19.54
40	VGSLAPPDG	54	1.6500	18.97

41	VNFRRQLGR	142	1.6000	18.39
42	FKLRDWLFA	514	1.5000	17.24
43	VEPLVQMLA	863	1.5000	17.24
44	VYRADSLVN	232	1.4000	16.09
45	LVNSDYLNG	480	1.4000	16.09
46	WIGRSTGAV	306	1.3000	14.94
47	VRGRVVVAA	919	1.3000	14.94
48	WAKLTAGER	214	1.2000	13.79
49	MRITAYADR	277	1.2000	13.79
50	YLVLAPEHD	346	1.2000	13.79
51	YVPAEQVIE	708	1.2000	13.79
52	FGKIGKSLK	736	1.2000	13.79
53	VQDMFPYPS	72	1.1000	12.64
54	YGTGAIMAV	434	1.1000	12.64
55	FLGSYAINP	408	1.0000	11.49
56	YRWTQWIFL	169	0.9600	11.03
57	LHVGHPLGY	84	0.9000	10.34
58	YAYTDARGS	699	0.9000	10.34
59	IDTLRALHR	814	0.8000	9.20
60	LGTFNPNP	45	0.7500	8.62
61	MMRITAYAD	276	0.7000	8.05
62	VMPQWAGSS	603	0.7000	8.05
63	LAPLAPHIA	870	0.7000	8.05
64	FNVNPNVGS	48	0.6000	6.90
65	WTQWIFLQI	171	0.6000	6.90
66	WVHVLDLDL	583	0.6000	6.90
67	LVNQGVIQA	690	0.6000	6.90
68	FGHDSRRSF	153	0.5000	5.75
69	IEYTNHLTK	844	0.5000	5.75
70	LVLAPEHDL	347	0.4600	5.29
71	YSRFWHKVL	667	0.4600	5.29
72	LVDELVAAS	355	0.4000	4.60
73	LHLLYSRFW	663	0.4000	4.60
74	VNGKVRGRV	915	0.4000	4.60

75	FGLPIVEVI	456	0.3000	3.45
76	LGNTTSLAH	885	0.3000	3.45
77	YLVDETVEY	903	0.3000	3.45
78	YWMGPRPAE	634	0.2500	2.87
79	YAINPANGE	412	0.2000	2.30
80	LRNNTATAK	834	0.2000	2.30
81	VIVVAGRLV	956	0.2000	2.30
82	VGRNVLHAL	105	0.1600	1.84
83	VNWCPLGT	239	0.1000	1.15
84	YTGDGILVN	474	0.1000	1.15
85	WLFARQRYW	519	0.1000	1.15
86	LFARQRYWG	520	0.1000	1.15
87	LYDLGHVSS	675	0.1000	1.15
88	YIQAYAYTD	695	0.1000	1.15
89	WATKDVVGA	777	0.1000	1.15
90	LFGATYLVL	341	0.0600	0.69
91	LVAASWPAG	359	0.0500	0.57

ALLELE: DRB1_1307		Threshold for 3 % with score: 0.6	Highest Score achievable by any peptide: 6.8	
Rank	Sequence	At Position	Score	% of Highest Score
1	YRLVYRADS	229	5.3000	77.94
2	YRRAIAAKS	386	3.6000	52.94
3	YRFLQRVWR	786	3.0000	44.12
4	FRMVGRNVL	102	2.7000	39.71
5	WIFLQIYNA	174	2.6000	38.24
6	WMMRITAYA	275	2.6000	38.24
7	VVGAYRFLQ	782	1.9000	27.94
8	MQRNWIGRS	302	1.8000	26.47
9	LRYTDPHNS	615	1.7000	25.00
10	VQMLAPLAP	867	1.6000	23.53
11	MVGRNVLHA	104	1.5000	22.06
12	LQRVWRLVV	789	1.3000	19.12

13	LHRTIVGVS	820	1.3000	19.12
14	YRRLVNQGY	687	1.2000	17.65
15	FGKIGKSLK	736	1.1000	16.18
16	WARLGTFFNV	42	1.0000	14.71
17	LNGMSVPAA	486	1.0000	14.71
18	FRKRLRQWM	268	0.9000	13.24
19	LVQMLAPLA	866	0.9000	13.24
20	IVVAGRLVN	957	0.9000	13.24
21	VVNFRRQLG	141	0.8000	11.76
22	VRGRVVVAA	919	0.8000	11.76
23	YRYTAELAA	24	0.7000	10.29
24	FQEFGKIGK	733	0.6000	8.82
25	YFRMVGRNV	101	0.5000	7.35
26	LVNWCPGLG	238	0.5000	7.35
27	VKTMQRNWI	299	0.5000	7.35
28	WLRLGNTTS	882	0.5000	7.35
29	FLQIYNAWF	176	0.3000	4.41
30	YAYTDARGS	699	0.3000	4.41
31	FRRQLGRLG	144	0.2000	2.94
32	WIGRSTGAV	306	0.2000	2.94
33	YVLAGYGTG	429	0.2000	2.94
34	VMPQWAGSS	603	0.2000	2.94
35	LHLLYSRFW	663	0.2000	2.94
36	LRALHRTIV	817	0.2000	2.94
37	WMGPRPAEH	635	0.1800	2.65
38	FPVFRKRLR	265	0.1000	1.47
39	YTNHLTKKH	846	-0.0200	0
40	VNPLWTYGG	368	-0.1000	0
41	WLFARQRYW	519	-0.1000	0
42	VEPLVQMLA	863	-0.1000	0
43	VQVNGKVRG	913	-0.1000	0
44	VALFSARAA	314	-0.2000	0
45	LPIVEVIAG	458	-0.2000	0
46	LESAGRGRA	502	-0.2000	0

47	FNVPNPVGS	48	-0.3000	0
48	YARYFRMVG	98	-0.3000	0
49	MRITAYADR	277	-0.3000	0
50	FKLRDWLFA	514	-0.3000	0
51	YIATDVYAR	92	-0.4000	0
52	WAKLTAGER	214	-0.4000	0
53	WATKDVVGA	777	-0.4000	0
54	VWRLVVDEH	792	-0.4200	0
55	WVHVDLDLG	583	-0.5000	0
56	IMAVPGHDQ	439	-0.6000	0
57	FARAFGLPI	452	-0.6000	0
58	IAAYRRAIA	383	-0.7000	0
59	FIADYVLAG	425	-0.7000	0
60	YVPAEQVIE	708	-0.7000	0
61	VNGKVRGRV	915	-0.7000	0
62	LYDLGHVSS	675	-0.8000	0
63	FAALRNNTA	831	-0.8000	0
64	VGSLAPPDG	54	-0.9000	0
65	LGNTTSLAH	885	-0.9200	0
66	FYRWTQWIF	168	-1.0000	0
67	FGATYLVLA	342	-1.0000	0
68	YLVLAPEHD	346	-1.0000	0
69	YGGGTPGEA	374	-1.0000	0
70	VEVIAGGNI	461	-1.0000	0
71	LVNQGYIQA	690	-1.0000	0
72	LRNNTATAK	834	-1.0000	0
73	VIVVAGRLV	956	-1.0000	0
74	MMRITAYAD	276	-1.1000	0
75	LRDWLFARQ	516	-1.1000	0
76	YSRFWHKVL	667	-1.1000	0
77	VQAFLAGAT	944	-1.1000	0
78	YELRYTDPH	613	-1.1200	0
79	VYRADSLVN	232	-1.2000	0
80	IGRSTGAVA	307	-1.2000	0

81	LVLAPEHDL	347	-1.2000	0
82	IFIADYVLA	424	-1.2000	0
83	VPAAKRAIV	491	-1.2000	0
84	LGTFNVPNP	45	-1.4000	0
85	LGYIATDVY	90	-1.4000	0
86	VLHALGFDA	109	-1.4000	0
87	YRADSLVNW	233	-1.4000	0
88	VFRKRLRQW	267	-1.4000	0
89	YLNGMSVPA	485	-1.4000	0
90	VGGAEHAVL	655	-1.4000	0
91	IEYTNHLTK	844	-1.4000	0
92	FLAGATPRK	947	-1.4000	0

ALLELE: DRB1_1311	Threshold for 3 % with score: 2.0	Highest Score achievable by any peptide: 8.3
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Rank	Sequence	At Position	Score	% of Highest Score
1	VQMLAPLAP	867	4.4000	53.01
2	MVGRNVLHA	104	4.3000	51.81
3	YRLVYRADS	229	4.3000	51.81
4	LQRVWRLVV	789	4.1000	49.40
5	IVVAGRLVN	957	3.7000	44.58
6	LRYTDPHNS	615	3.4000	40.96
7	VVGAYRFLQ	782	3.4000	40.96
8	LNGMSVPAA	486	3.1500	37.95
9	LVQMLAPLA	866	3.0500	36.75
10	MQRNWIGRS	302	2.9000	34.94
11	YRRAIAAKS	386	2.6000	31.33
12	YRFLQRVWR	786	2.5000	30.12
13	VEPLVQMLA	863	2.5000	30.12
14	LPIVEVIAG	458	2.4000	28.92
15	LHRTIVGVS	820	2.4000	28.92
16	WIFLQIYNA	174	2.3000	27.71
17	LRALHRTIV	817	2.3000	27.71

18	VRGRVVVAA	919	2.3000	27.71
19	FRMVGRNVL	102	2.0000	24.10
20	VVNFRRQLG	141	1.9000	22.89
21	LGNTTSLAH	885	1.8800	22.65
22	VKTMQRNWI	299	1.8000	21.69
23	VQDMFPYPS	72	1.7000	20.48
24	LAPLAPHIA	870	1.7000	20.48
25	VYRADSLVN	232	1.6000	19.28
26	LVNWCPGLG	238	1.6000	19.28
27	WMMRITAYA	275	1.6000	19.28
28	VNPLWTYGG	368	1.6000	19.28
29	LVNQGYIQA	690	1.6000	19.28
30	YRYTAELAA	24	1.5000	18.07
31	LHLLYSRFW	663	1.4000	16.87
32	IEYTNHLTK	844	1.4000	16.87
33	VQVNGKVRG	913	1.4000	16.87
34	VMPQWAGSS	603	1.3000	15.66
35	VGSLAPPDG	54	1.2500	15.06
36	FQEF GKIGK	733	1.2000	14.46
37	VNFRRQLGR	142	1.1000	13.25
38	IMAVPGHDQ	439	1.1000	13.25
39	LRNNTATAK	834	1.1000	13.25
40	VALFSARAA	314	1.0000	12.05
41	LVDELVAAS	355	1.0000	12.05
42	LVNSDYLNG	480	1.0000	12.05
43	LESAGRGRA	502	0.9000	10.84
44	LGTFNVPNP	45	0.7500	9.04
45	MRITAYADR	277	0.7000	8.43
46	LYDLGHVSS	675	0.7000	8.43
47	LHVGHPLGY	84	0.6000	7.23
48	MMRITAYAD	276	0.6000	7.23
49	WLRLGNTTS	882	0.6000	7.23
50	WARLGTFNV	42	0.5000	6.02
51	LVLAPEHDL	347	0.5000	6.02

52	FKLRDWLFA	514	0.5000	6.02
53	VNWCPLGT	239	0.4000	4.82
54	VNGKVRGRV	915	0.4000	4.82
55	YARYFRMVG	98	0.3000	3.61
56	IAAYRRAIA	383	0.3000	3.61
57	IFIADYVLA	424	0.3000	3.61
58	YRRLVNQGY	687	0.3000	3.61
59	IDTLRALHR	814	0.3000	3.61
60	VWRLVVDEH	792	0.2800	3.37
61	VGRNVLHAL	105	0.2000	2.41
62	LDDLDVLDW	287	0.2000	2.41
63	FARAFGLPI	452	0.2000	2.41
64	VIVVAGRLV	956	0.2000	2.41
65	VLHALGFDA	109	0.1000	1.20
66	LFGATYLVL	341	0.1000	1.20
67	FIADYVLAG	425	0.1000	1.20
68	VEVIAGGNI	461	0.1000	1.20
69	FGKIGKSLK	736	0.1000	1.20
70	LQIYNAWFD	177	-0.1000	0
71	LRDWLFARQ	516	-0.1000	0
72	VLYDLGHVS	674	-0.1000	0
73	VFRKRLRQW	267	-0.2000	0
74	IGRSTGAVA	307	-0.2000	0
75	VPAAKRAIV	491	-0.2000	0
76	YFRMVGRNV	101	-0.3000	0
77	IEVFTTRPD	331	-0.3000	0
78	LGSYAINPA	409	-0.3000	0
79	LFARQRYWG	520	-0.3000	0
80	LVAASWPAG	359	-0.3500	0
81	VIDEYRLVY	225	-0.4000	0
82	LRQWMMRIT	272	-0.4000	0
83	LERQESREK	396	-0.4000	0
84	LAGYGTGAI	431	-0.4000	0
85	VGGAEHAVL	655	-0.4000	0

86	LAGATPRKV	948	-0.4000	0
87	YTNHLTKKH	846	-0.4200	0
88	VELPDVPDY	551	-0.4500	0
89	IVEVIAGGN	460	-0.5000	0
90	YAYTDARGS	699	-0.5000	0
91	LGDGLKPYS	590	-0.5500	0

ALLELE: DRB1_1321	Threshold for 3 % with score: 2.2	Highest Score achievable by any peptide: 8.9
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRLVYRADS	229	5.3000	59.55
2	IVVAGRLVN	957	4.7000	52.81
3	FRMVGRNVL	102	4.0000	44.94
4	VQMLAPLAP	867	3.8000	42.70
5	YRRAIAAKS	386	3.6000	40.45
6	YRFLQRVWR	786	3.5000	39.33
7	LQRVWRLVV	789	3.4000	38.20
8	MVGRNVLHA	104	3.3000	37.08
9	WIFLQIYNA	174	3.3000	37.08
10	VVGAYRFLQ	782	3.2000	35.96
11	YLVLAPEHD	346	2.8000	31.46
12	YVPAEQVIE	708	2.8000	31.46
13	LPIVEVIAG	458	2.7000	30.34
14	YARYFRMVG	98	2.6000	29.21
15	VYRADSLVN	232	2.6000	29.21
16	WMMRITAYA	275	2.6000	29.21
17	YRYTAELAA	24	2.5000	28.09
18	FIADYVLAG	425	2.4000	26.97
19	LRYTDPHNS	615	2.4000	26.97
20	YRRLVNQGY	687	2.4000	26.97
21	MMRITAYAD	276	2.3000	25.84
22	VVNFRRQLG	141	2.2000	24.72
23	LNGMSVPAA	486	2.1500	24.16

24	FRKRLRQWM	268	2.1000	23.60
25	LGNTTSLAH	885	2.1000	23.60
26	LVQMLAPLA	866	2.0500	23.03
27	LVNWCPGLG	238	1.9000	21.35
28	MQRNWIGRS	302	1.9000	21.35
29	VNPLWTYGG	368	1.9000	21.35
30	YWMGPRPAE	634	1.8500	20.79
31	WARLGTFFNV	42	1.8000	20.22
32	YAINPANGE	412	1.8000	20.22
33	YTNHLTKKH	846	1.8000	20.22
34	FRRQLGRLG	144	1.7000	19.10
35	YIQAYAYTD	695	1.7000	19.10
36	VQVNGKVRG	913	1.7000	19.10
37	LQIYNWFD	177	1.6000	17.98
38	YVLAGYGTG	429	1.6000	17.98
39	LRALHRTIV	817	1.6000	17.98
40	WLRLGNTTS	882	1.6000	17.98
41	VGSLAPPDG	54	1.5500	17.42
42	FKLRDWLFA	514	1.5000	16.85
43	FQEFGKIGK	733	1.5000	16.85
44	VEPLVQMLA	863	1.5000	16.85
45	IEVFTTRPD	331	1.4000	15.73
46	FARAFGLPI	452	1.4000	15.73
47	WMGPRPAEH	635	1.4000	15.73
48	LHRTIVGVS	820	1.4000	15.73
49	YEMSMGPLE	764	1.3500	15.17
50	YTG DGILVN	474	1.3000	14.61
51	LVNSDY LNG	480	1.3000	14.61
52	LHLLYSRFW	663	1.3000	14.61
53	VRGRVVVAA	919	1.3000	14.61
54	FLQIYNWAF	176	1.2000	13.48
55	LKNSVSPDE	743	1.0500	11.80
56	YFRMVGRNV	101	1.0000	11.24
57	YRWTQWIFL	169	1.0000	11.24

58	VKTMQRNWI	299	1.0000	11.24
59	LFSARAASD	316	1.0000	11.24
60	WLFARQRYW	519	1.0000	11.24
61	IMAVPGHDQ	439	0.9000	10.11
62	VQDMFPYPS	72	0.7000	7.87
63	LHVGHPGLY	84	0.7000	7.87
64	FYRWTQWIF	168	0.7000	7.87
65	LAPLAPHIA	870	0.7000	7.87
66	FESGARCLD	201	0.6000	6.74
67	WIGRSTGAV	306	0.6000	6.74
68	LVNQGYYQA	690	0.6000	6.74
69	FDAFGLPAE	115	0.5500	6.18
70	LGRLGFGHD	148	0.5000	5.62
71	LVLAPEHDL	347	0.5000	5.62
72	IVEVIAGGN	460	0.5000	5.62
73	WVHVLDLDG	583	0.5000	5.62
74	YSRFWHKVL	667	0.5000	5.62
75	YAYTDARGS	699	0.5000	5.62
76	VWRLVVDEH	792	0.5000	5.62
77	VVAADTDEE	924	0.5000	5.62
78	FLGSYAINP	408	0.4000	4.49
79	YGTGAIMAV	434	0.4000	4.49
80	FGKIGKSLK	736	0.4000	4.49
81	YIATDVYAR	92	0.3000	3.37
82	VNWCPLGT	239	0.3000	3.37
83	FPVFRKRLR	265	0.3000	3.37
84	VMPQWAGSS	603	0.3000	3.37
85	FVYPPDGE	721	0.3000	3.37
86	LKAAVLTDE	934	0.3000	3.37
87	FNVNPNVGS	48	0.2000	2.25
88	VGRNVLHAL	105	0.2000	2.25
89	LGTVLANEE	245	0.2000	2.25
90	LGTFNPNP	45	0.1500	1.69
91	VNFRRQLGR	142	0.1000	1.12

92	LDDLDVLDW	287	0.1000	1.12
93	LFGATYLVL	341	0.1000	1.12
94	WATKDVVGA	777	0.1000	1.12
95	YLVDETVEY	903	0.1000	1.12

ALLELE: DRB1_1322	Threshold for 3 % with score: 1.8	Highest Score achievable by any peptide: 8.4
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Rank	Sequence	At Position	Score	% of Highest Score
1	VVGAYRFLQ	782	4.4000	52.38
2	MVGRNVLHA	104	4.1000	48.81
3	VRGRVVVAA	919	3.7000	44.05
4	LRYTDPHNS	615	3.4000	40.48
5	VVNFRRQLG	141	3.0000	35.71
6	YRLVYRADS	229	3.0000	35.71
7	VALFSARAA	314	3.0000	35.71
8	VFRKRLRQW	267	2.7000	32.14
9	VKTMQRNWI	299	2.7000	32.14
10	YRRAIAAKS	386	2.6000	30.95
11	VQMLAPLAP	867	2.6000	30.95
12	IVVAGRLVN	957	2.6000	30.95
13	WMMRITAYA	275	2.5000	29.76
14	LNGMSVPAA	486	2.5000	29.76
15	LVQMLAPLA	866	2.4000	28.57
16	LHLLYSRFW	663	2.3000	27.38
17	YRFLQRVWR	786	2.3000	27.38
18	LERQESREK	396	2.2000	26.19
19	FRRQLGRLG	144	2.0000	23.81
20	LRQWMMRIT	272	2.0000	23.81
21	LRALHRTIV	817	2.0000	23.81
22	VQVNGKVRG	913	2.0000	23.81
23	MQRNWIGRS	302	1.9000	22.62
24	LGSYAINPA	409	1.9000	22.62
25	YTNHLTKKH	846	1.8800	22.38

26	FRMVGRNVL	102	1.8000	21.43
27	WIFLQIYNA	174	1.8000	21.43
28	LQIYNAWFD	177	1.8000	21.43
29	VQDMFPYPS	72	1.7000	20.24
30	IEVFTTRPD	331	1.7000	20.24
31	LQRVWRLVV	789	1.7000	20.24
32	FRKRLRQWM	268	1.6000	19.05
33	LVDELVAAS	355	1.6000	19.05
34	LRNNTATAK	834	1.6000	19.05
35	LAPLAPHIA	870	1.5000	17.86
36	IAAYRRAIA	383	1.4000	16.67
37	LVNWCPGLG	238	1.3000	15.48
38	FPVFRKRLR	265	1.3000	15.48
39	LVNQGVIQA	690	1.3000	15.48
40	VMPQWAGSS	603	1.2000	14.29
41	LAGATPRKV	948	1.2000	14.29
42	YFRMVGRNV	101	1.1000	13.10
43	VLHALGFDA	109	1.1000	13.10
44	VNPLWTYGG	368	1.1000	13.10
45	VPGHDQRDW	442	1.1000	13.10
46	LVLAPEHDL	347	1.0000	11.90
47	VAGRLVNLV	959	1.0000	11.90
48	VNFRRQLGR	142	0.9000	10.71
49	WATKDVVGA	777	0.9000	10.71
50	WARLGTFFV	42	0.8000	9.52
51	VGRNVLHAL	105	0.8000	9.52
52	IFIADYVLA	424	0.8000	9.52
53	LFARQRYWG	520	0.8000	9.52
54	LHRTIVGVS	820	0.8000	9.52
55	VLTDEKVQA	938	0.8000	9.52
56	VWRLVVDEH	792	0.7800	9.29
57	LGTFNVPNP	45	0.7000	8.33
58	LRDWLFARQ	516	0.7000	8.33
59	WLFARQRYW	519	0.7000	8.33

60	VLYDLGHVS	674	0.7000	8.33
61	LFVQDMFPY	70	0.6000	7.14
62	YAYTDARGS	699	0.6000	7.14
63	IGKSLKNSV	739	0.6000	7.14
64	LRLGNTTSL	883	0.6000	7.14
65	VNGKVRGRV	915	0.6000	7.14
66	VYRADSLVN	232	0.5000	5.95
67	LYDLGHVSS	675	0.5000	5.95
68	VEPLVQMLA	863	0.5000	5.95
69	VIVVAGRLV	956	0.5000	5.95
70	FYRWTQWIF	168	0.4000	4.76
71	IMAVPGHDQ	439	0.3000	3.57
72	FKLRDWLFA	514	0.3000	3.57
73	YRRLVNQGY	687	0.3000	3.57
74	VEVFQEF GK	730	0.3000	3.57
75	FQEF GKIGK	733	0.3000	3.57
76	LRVYEMSMG	761	0.3000	3.57
77	WLRLGNTTS	882	0.3000	3.57
78	LGNTTSLAH	885	0.2800	3.33
79	VYARYFRMV	97	0.2000	2.38
80	MRITAYADR	277	0.2000	2.38
81	IEFKLRDWL	512	0.2000	2.38
82	VGSLAPPDG	54	0.1000	1.19
83	YARYFRMVG	98	0.1000	1.19
84	IFLQIYNAW	175	0.1000	1.19
85	YRYTAELAA	24	-0.1000	0
86	FNVPNPVGS	48	-0.1000	0
87	IGRSTGAVA	307	-0.1000	0
88	LKPYSRDTN	594	-0.1000	0
89	LLYSRFWHK	665	-0.1000	0
90	IERGDRFVY	715	-0.1000	0
91	LPIVEVIAG	458	-0.2000	0
92	VPAAKRAIV	491	-0.2000	0
93	LESAGRGRA	502	-0.2000	0

94	IEYTNHLTK	844	-0.2000	0
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ALLELE: DRB1_1323	Threshold for 3 % with score: 1.3	Highest Score achievable by any peptide: 8.4
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Rank	Sequence	At Position	Score	% of Highest Score
1	YRLVYRADS	229	4.0000	47.62
2	YRRAIAAKS	386	3.6000	42.86
3	WMMRITAYA	275	3.5000	41.67
4	VVGAYRFLQ	782	3.4000	40.48
5	YRFLQRVWR	786	3.3000	39.29
6	MVGRNVLHA	104	3.1000	36.90
7	FRRQLGRLG	144	3.0000	35.71
8	YTNHLTKKH	846	2.8800	34.29
9	FRMVGRNVL	102	2.8000	33.33
10	WIFLQIYNA	174	2.8000	33.33
11	VRGRVVVAA	919	2.7000	32.14
12	FRKRLRQWM	268	2.6000	30.95
13	LRYTDPHNS	615	2.4000	28.57
14	FPVFRKRLR	265	2.3000	27.38
15	YFRMVGRNV	101	2.1000	25.00
16	VVNFRRQLG	141	2.0000	23.81
17	VALFSARAA	314	2.0000	23.81
18	WATKDVVGA	777	1.9000	22.62
19	WARLGTFFNV	42	1.8000	21.43
20	VFRKRLRQW	267	1.7000	20.24
21	VKTMQRNWI	299	1.7000	20.24
22	WLFARQRYW	519	1.7000	20.24
23	YAYTDARGS	699	1.6000	19.05
24	VQMLAPLAP	867	1.6000	19.05
25	IVVAGRLVN	957	1.6000	19.05
26	LNGMSVPAA	486	1.5000	17.86
27	FYRWTQWIF	168	1.4000	16.67
28	LVQMLAPLA	866	1.4000	16.67

29	FKLRDWLFA	514	1.3000	15.48
30	LHLLYSRFW	663	1.3000	15.48
31	YRRLVNQGY	687	1.3000	15.48
32	FQEFGKIGK	733	1.3000	15.48
33	WLRLGNTTS	882	1.3000	15.48
34	LERQESREK	396	1.2000	14.29
35	YARYFRMVG	98	1.1000	13.10
36	LRQWMMRIT	272	1.0000	11.90
37	LRALHRTIV	817	1.0000	11.90
38	VQVNGKVRG	913	1.0000	11.90
39	YRYTAELAA	24	0.9000	10.71
40	FNVPNPVGS	48	0.9000	10.71
41	MQRNWIGRS	302	0.9000	10.71
42	LGSYAINPA	409	0.9000	10.71
43	LQIYNAWFD	177	0.8000	9.52
44	VQDMFPYPS	72	0.7000	8.33
45	IEVFTTRPD	331	0.7000	8.33
46	LQRVWRLVV	789	0.7000	8.33
47	YELRYTDPH	613	0.6800	8.10
48	LVDELVAAS	355	0.6000	7.14
49	LRNNTATAK	834	0.6000	7.14
50	FGHDSRRSF	153	0.5000	5.95
51	LAPLAPHIA	870	0.5000	5.95
52	IAAYRRAIA	383	0.4000	4.76
53	WMGPRPAEH	635	0.3800	4.52
54	WQENWARLG	38	0.3000	3.57
55	LVNWCPGLG	238	0.3000	3.57
56	FIADYVLAG	425	0.3000	3.57
57	LVNQGYIQA	690	0.3000	3.57
58	YVPAEQVIE	708	0.3000	3.57
59	FLQRVWRLV	788	0.3000	3.57
60	VMPQWAGSS	603	0.2000	2.38
61	LAGATPRKV	948	0.2000	2.38
62	VLHALGFDA	109	0.1000	1.19

63	WIGRSTGAV	306	0.1000	1.19
64	VNPLWTYGG	368	0.1000	1.19
65	VPGHDQRDW	442	0.1000	1.19
66	FARAFGLPI	452	0.1000	1.19
67	YSRFWHKVL	667	0.1000	1.19
68	VNFRRQLGR	142	-0.1000	0
69	YRADSLVNW	233	-0.1000	0
70	FGLPIVEVI	456	-0.1000	0
71	FWHKVLYDL	670	-0.1000	0
72	FAALRNNTA	831	-0.1000	0
73	VGRNVLHAL	105	-0.2000	0
74	WPEQVKTMQ	295	-0.2000	0
75	IFIADYVLA	424	-0.2000	0
76	YLNQMSVPA	485	-0.2000	0
77	LFARQRYWG	520	-0.2000	0
78	LHRTIVGVS	820	-0.2000	0
79	YLVDETVEY	903	-0.2000	0
80	VLTKDEKQVA	938	-0.2000	0
81	VWRLVVDEH	792	-0.2200	0
82	LGTFNVPNP	45	-0.3000	0
83	YLVLAPEHD	346	-0.3000	0
84	LRDWLFARQ	516	-0.3000	0
85	VLYDLGHVS	674	-0.3000	0
86	LFVQDMFPY	70	-0.4000	0
87	IGKSLKNSV	739	-0.4000	0
88	LRLGNTTSL	883	-0.4000	0
89	VNGKVRGRV	915	-0.4000	0
90	VYRADSLVN	232	-0.5000	0

ALLELE: DRB1_1327	Threshold for 3 % with score: 2.6	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	VVNFRRQLG	141	4.4000	50.00

2	MVGRNVLHA	104	4.1000	46.59
3	LRYTDPHNS	615	3.8000	43.18
4	YRFLQRVWR	786	3.8000	43.18
5	VVGAYRFLQ	782	3.7000	42.05
6	VRGRVVVAA	919	3.7000	42.05
7	VKTMQRNWI	299	3.6000	40.91
8	VQMLAPLAP	867	3.6000	40.91
9	FRRQLGRLG	144	3.4000	38.64
10	YRLVYRADS	229	3.4000	38.64
11	VQVNGKVRG	913	3.4000	38.64
12	IVVAGRLVN	957	3.4000	38.64
13	FRKRLRQWM	268	3.1000	35.23
14	VALFSARAA	314	3.0000	34.09
15	YRRAIAAKS	386	3.0000	34.09
16	LRALHRTIV	817	3.0000	34.09
17	LQIYNAWFD	177	2.9000	32.95
18	FPVFRKRLR	265	2.8000	31.82
19	IEVFTTRPD	331	2.8000	31.82
20	FRMVGRNVL	102	2.7600	31.36
21	LVNWCPGLG	238	2.7000	30.68
22	VFRKRLRQW	267	2.7000	30.68
23	LRQWMMRIT	272	2.7000	30.68
24	LQRVWRLVV	789	2.7000	30.68
25	WMMRITAYA	275	2.5000	28.41
26	VNPLWTYGG	368	2.5000	28.41
27	LNGMSVPAA	486	2.5000	28.41
28	VNFRRQLGR	142	2.4000	27.27
29	LVQMLAPLA	866	2.4000	27.27
30	FYRWTQWIF	168	2.3000	26.14
31	MQRNWIGRS	302	2.3000	26.14
32	LERQESREK	396	2.3000	26.14
33	LHLLYSRFW	663	2.3000	26.14
34	LFARQRYWG	520	2.2000	25.00
35	LAGATPRKV	948	2.2000	25.00

36	VQDMFPYPS	72	2.1000	23.86
37	YFRMVGRNV	101	2.1000	23.86
38	LVDELVAAS	355	2.0000	22.73
39	VAGRLVNLV	959	2.0000	22.73
40	LVLAPEHDL	347	1.9600	22.27
41	LFVQDMFPY	70	1.9000	21.59
42	LGSYAINPA	409	1.9000	21.59
43	WARLGTFFNV	42	1.8000	20.45
44	WIFLQIYNA	174	1.8000	20.45
45	VGRNVLHAL	105	1.7600	20.00
46	LGTFFNPNP	45	1.7000	19.32
47	MRITAYADR	277	1.7000	19.32
48	LRVYEMSMG	761	1.7000	19.32
49	LRNNTATAK	834	1.7000	19.32
50	VMPQWAGSS	603	1.6000	18.18
51	YRRLVNQGY	687	1.6000	18.18
52	IGKSLKNSV	739	1.6000	18.18
53	VNGKVRGRV	915	1.6000	18.18
54	LRLGNTTSL	883	1.5600	17.73
55	VGSLAPPDG	54	1.5000	17.05
56	YARYFRMVG	98	1.5000	17.05
57	LAPLAPHIA	870	1.5000	17.05
58	VIVVAGRLV	956	1.5000	17.05
59	FGHDSRRSF	153	1.4000	15.91
60	IAAYRAIA	383	1.4000	15.91
61	LVNSDYLNG	480	1.4000	15.91
62	VYRADSLVN	232	1.3000	14.77
63	LVNQGYIQA	690	1.3000	14.77
64	YTNHLTKKH	846	1.3000	14.77
65	VYARYFRMV	97	1.2000	13.64
66	LPIVEVIAG	458	1.2000	13.64
67	IERGDRFVY	715	1.2000	13.64
68	LHRTIVGVS	820	1.2000	13.64
69	IEFKLRDWL	512	1.1600	13.18

70	VLHALGFDA	109	1.1000	12.50
71	VPGHDQRDW	442	1.1000	12.50
72	VLYDLGHVS	674	1.1000	12.50
73	VVAADTDEE	924	1.1000	12.50
74	LHVGHPLGY	84	1.0000	11.36
75	VNSDYLNMG	481	1.0000	11.36
76	YAYTDARGS	699	1.0000	11.36
77	LYDLGHVSS	675	0.9000	10.23
78	VSSREPYRR	681	0.9000	10.23
79	WATKDVVGA	777	0.9000	10.23
80	IFIADYVLA	424	0.8000	9.09
81	VPAAKRAIV	491	0.8000	9.09
82	VLTDEKVQA	938	0.8000	9.09
83	LAPHIAEEL	873	0.7600	8.64
84	WQENWARLG	38	0.7000	7.95
85	FIADYVLAG	425	0.7000	7.95
86	WLFARQRYW	519	0.7000	7.95
87	LKPYSRDTN	594	0.7000	7.95
88	YVPAEQVIE	708	0.7000	7.95
89	WLRLGNTTS	882	0.7000	7.95
90	VVAGRLVNL	958	0.6600	7.50
91	LVAASWPAG	359	0.6000	6.82
92	VPIFIADYV	422	0.6000	6.82
93	VELPDVPDY	551	0.6000	6.82
94	LGHVSSREP	678	0.6000	6.82
95	LTKKHRDAV	850	0.6000	6.82
96	VGGAEHA VL	655	0.5600	6.36

ALLELE: DRB1_1328	Threshold for 3 % with score: 2.6	Highest Score achievable by any peptide: 8.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	VVNFRRLQLG	141	4.4000	50.00
2	MVGRNVLHA	104	4.1000	46.59

3	LRYTDPHNS	615	3.8000	43.18
4	YRFLQRVWR	786	3.8000	43.18
5	VVGAYRFLQ	782	3.7000	42.05
6	VRGRVVVAA	919	3.7000	42.05
7	VKTMQRNWI	299	3.6000	40.91
8	VQMLAPLAP	867	3.6000	40.91
9	FRRQLGRLG	144	3.4000	38.64
10	YRLVYRADS	229	3.4000	38.64
11	VQVNGKVRG	913	3.4000	38.64
12	IVVAGRLVN	957	3.4000	38.64
13	FRKRLRQWM	268	3.1000	35.23
14	VALFSARAA	314	3.0000	34.09
15	YRRAIAAKS	386	3.0000	34.09
16	LRALHRTIV	817	3.0000	34.09
17	LQIYNAWFD	177	2.9000	32.95
18	FPVFRKRLR	265	2.8000	31.82
19	IEVFTTRPD	331	2.8000	31.82
20	FRMVGRNVL	102	2.7600	31.36
21	LVNWCPGLG	238	2.7000	30.68
22	VFRKRLRQW	267	2.7000	30.68
23	LRQWMMRIT	272	2.7000	30.68
24	LQRVWRLVV	789	2.7000	30.68
25	WMMRITAYA	275	2.5000	28.41
26	VNPLWTYGG	368	2.5000	28.41
27	LNGMSVPAA	486	2.5000	28.41
28	VNFRRQLGR	142	2.4000	27.27
29	LVQMLAPLA	866	2.4000	27.27
30	FYRWTQWIF	168	2.3000	26.14
31	MQRNWIGRS	302	2.3000	26.14
32	LERQESREK	396	2.3000	26.14
33	LHLLYSRFW	663	2.3000	26.14
34	LFARQRYWG	520	2.2000	25.00
35	LAGATPRKV	948	2.2000	25.00
36	VQDMFPYPS	72	2.1000	23.86

37	YFRMVGRNV	101	2.1000	23.86
38	LVDELVAAS	355	2.0000	22.73
39	VAGRLVNLV	959	2.0000	22.73
40	LVLAPEHDL	347	1.9600	22.27
41	LFVQDMFPY	70	1.9000	21.59
42	LGSYAINPA	409	1.9000	21.59
43	WARLGTFFNV	42	1.8000	20.45
44	WIFLQIYNA	174	1.8000	20.45
45	VGRNVLHAL	105	1.7600	20.00
46	LGTFNPNP	45	1.7000	19.32
47	MRITAYADR	277	1.7000	19.32
48	LRVYEMSMG	761	1.7000	19.32
49	LRNNTATAK	834	1.7000	19.32
50	VMPQWAGSS	603	1.6000	18.18
51	YRRLVNQGY	687	1.6000	18.18
52	IGKSLKNSV	739	1.6000	18.18
53	VNGKVRGRV	915	1.6000	18.18
54	LRLGNTTSL	883	1.5600	17.73
55	VGSLAPPDG	54	1.5000	17.05
56	YARYFRMVG	98	1.5000	17.05
57	LAPLAPHIA	870	1.5000	17.05
58	VIVVAGRLV	956	1.5000	17.05
59	FGHDSRRSF	153	1.4000	15.91
60	IAAYRRAIA	383	1.4000	15.91
61	LVNSDYLNG	480	1.4000	15.91
62	VYRADSLVN	232	1.3000	14.77
63	LVNQGVIQA	690	1.3000	14.77
64	YTNHLTKKH	846	1.3000	14.77
65	VYARYFRMV	97	1.2000	13.64
66	LPIVEVIAG	458	1.2000	13.64
67	IERGDRFVY	715	1.2000	13.64
68	LHRTIVGVS	820	1.2000	13.64
69	IEFKLRDWL	512	1.1600	13.18
70	VLHALGFDA	109	1.1000	12.50

71	VPGHDQRDW	442	1.1000	12.50
72	VLYDLGHVS	674	1.1000	12.50
73	VVAADTDEE	924	1.1000	12.50
74	LHVGHPLGY	84	1.0000	11.36
75	VNSDYLNMG	481	1.0000	11.36
76	YAYTDARGS	699	1.0000	11.36
77	LYDLGHVSS	675	0.9000	10.23
78	VSSREPYRR	681	0.9000	10.23
79	WATKDVVGA	777	0.9000	10.23
80	IFIADYVLA	424	0.8000	9.09
81	VPAAKRAIV	491	0.8000	9.09
82	VLTDEKVQA	938	0.8000	9.09
83	LAPHIAEEL	873	0.7600	8.64
84	WQENWARLG	38	0.7000	7.95
85	FIADYVLAG	425	0.7000	7.95
86	WLFARQRYW	519	0.7000	7.95
87	LKPYSRDTN	594	0.7000	7.95
88	YVPAEQVIE	708	0.7000	7.95
89	WLRLGNTTS	882	0.7000	7.95
90	VVAGRLVNL	958	0.6600	7.50
91	LVAASWPAG	359	0.6000	6.82
92	VPIFIADYV	422	0.6000	6.82
93	VELPDVPDY	551	0.6000	6.82
94	LGHVSSREP	678	0.6000	6.82
95	LTKKHRDAV	850	0.6000	6.82
96	VGGAEHAVL	655	0.5600	6.36

ALLELE: DRB1_1501	Threshold for 3 % with score: 3.25	Highest Score achievable by any peptide: 9.8		
Rank	Sequence	At Position	Score	% of Highest Score
1	LQRVWRLVV	789	5.3000	54.08
2	FRMVGRNVL	102	5.0000	51.02
3	VVNFRRQLG	141	4.9000	50.00

4	LRVYEMSMG	761	4.8000	48.98
5	VKTMQRNWI	299	4.5000	45.92
6	IQAYAYTDA	696	4.3000	43.88
7	IVVAGRLVN	957	4.3000	43.88
8	LRALHRTIV	817	4.2000	42.86
9	YARYFRMVG	98	4.1000	41.84
10	MVGRNVLHA	104	4.1000	41.84
11	LGSYAINPA	409	3.9500	40.31
12	LQIYNAWFD	177	3.9000	39.80
13	LRLGNTTSL	883	3.8600	39.39
14	LFGATYLVL	341	3.8000	38.78
15	LVNSDYLVG	480	3.8000	38.78
16	LVNQGYIQA	690	3.7000	37.76
17	VQMLAPLAP	867	3.7000	37.76
18	VGAYRFLQR	783	3.6000	36.73
19	IAAYRRAIA	383	3.5000	35.71
20	LIEYTNHLT	843	3.5000	35.71
21	MFPYPSGEG	75	3.4000	34.69
22	LVQMLAPLA	866	3.4000	34.69
23	VQAFLAGAT	944	3.4000	34.69
24	LAGYGTGAI	431	3.3600	34.29
25	LVYRADSLV	231	3.3000	33.67
26	LVLAPEHDL	347	3.2000	32.65
27	VLHALGFDA	109	3.1000	31.63
28	YRLVYRADS	229	3.1000	31.63
29	VVGAYRFLQ	782	3.1000	31.63
30	VVAGRLVNL	958	3.1000	31.63
31	VNWCPGLGT	239	3.0000	30.61
32	VPIFIADYV	422	3.0000	30.61
33	IFIADYVLA	424	3.0000	30.61
34	LKPYSRDTN	594	3.0000	30.61
35	VYRADSLVN	232	2.9000	29.59
36	VALFSARAA	314	2.9000	29.59
37	MRITAYADR	277	2.8000	28.57

38	FARAFGLPI	452	2.8000	28.57
39	FKLRDWLFA	514	2.8000	28.57
40	LRYTDPHNS	615	2.8000	28.57
41	YRFLQRVWR	786	2.8000	28.57
42	YRYTAEALAA	24	2.6000	26.53
43	VRGRVVVAA	919	2.6000	26.53
44	YRWTQWIFL	169	2.5000	25.51
45	VEVIAGGNI	461	2.4000	24.49
46	VGRNVLHAL	105	2.3000	23.47
47	IERGDRFVY	715	2.3000	23.47
48	VLYDLGHVS	674	2.2000	22.45
49	FRKRLRQWM	268	2.1800	22.24
50	WIFLQIYNA	174	2.1500	21.94
51	LHVGHPLGY	84	2.1000	21.43
52	ITAYADRL	279	2.1000	21.43
53	LWLRLGNTT	881	2.1000	21.43
54	LGNTTSLAH	885	2.1000	21.43
55	VIVVAGRLV	956	2.1000	21.43
56	LVNWCPGLG	238	2.0000	20.41
57	LRQWMMRIT	272	2.0000	20.41
58	LNGMSVPAA	486	2.0000	20.41
59	VLHLLYSRF	662	2.0000	20.41
60	VNFRRQLGR	142	1.9000	19.39
61	LFARQRYWG	520	1.9000	19.39
62	YRRLVNQGY	687	1.9000	19.39
63	WARLGTFNV	42	1.8600	18.98
64	LGTFNPNP	45	1.8000	18.37
65	YFRMVGRNV	101	1.8000	18.37
66	LWTYGGGTP	371	1.8000	18.37
67	LYSRFWHKV	666	1.8000	18.37
68	VEPLVQMLA	863	1.8000	18.37
69	WLRLGNTTS	882	1.8000	18.37
70	WTQWIFLQI	171	1.7000	17.35
71	YVLAGYGTG	429	1.7000	17.35

72	VLAGYGTGA	430	1.7000	17.35
73	VEVFQEF GK	730	1.7000	17.35
74	VGVSEDFAA	825	1.7000	17.35
75	MLAPLAPHI	869	1.7000	17.35
76	WMMRITAYA	275	1.6600	16.94
77	VGHPLGYIA	86	1.6000	16.33
78	YRRAIAAKS	386	1.6000	16.33
79	LPIVEVIAG	458	1.6000	16.33
80	VNGKVRGRV	915	1.6000	16.33
81	VNSDYLN GM	481	1.5800	16.12
82	YGTGAIMAV	434	1.5500	15.82
83	YSRFWHKVL	667	1.5000	15.31
84	VNPLW TYGG	368	1.4600	14.90
85	MQRNWIGRS	302	1.4500	14.80
86	VPRYRYTAE	21	1.4000	14.29
87	YPSGEG LHV	78	1.4000	14.29
88	IGRSTGAVA	307	1.4000	14.29
89	VIAGGNISE	463	1.4000	14.29
90	YLN GMSVPA	485	1.4000	14.29
91	LTAGERADV	217	1.3000	13.27
92	LESAGR GRA	502	1.3000	13.27
93	VYEMSMGPL	763	1.3000	13.27
94	VIDEYRLVY	225	1.2000	12.24
95	MMRITAYAD	276	1.2000	12.24
96	LVAASWPAG	359	1.2000	12.24

ALLELE: DRB1_1502	Threshold for 3 % with score: 3.25	Highest Score achievable by any peptide: 9.8		
Rank	Sequence	At Position	Score	% of Highest Score
1	FRMVGRNVL	102	6.0000	61.22
2	YARYFRMVG	98	5.1000	52.04
3	LQRVWRLVV	789	4.3000	43.88
4	YRLVYRADS	229	4.1000	41.84

5	VVNFRRQLG	141	3.9000	39.80
6	FARAFGLPI	452	3.8000	38.78
7	FKLRDWLFA	514	3.8000	38.78
8	LRVYEMSMG	761	3.8000	38.78
9	YRFLQRVWR	786	3.8000	38.78
10	YRYTAELAA	24	3.6000	36.73
11	YRWTQWIFL	169	3.5000	35.71
12	VKTMQRNWI	299	3.5000	35.71
13	IQAYAYTDA	696	3.3000	33.67
14	IVVAGRLVN	957	3.3000	33.67
15	LRALHRTIV	817	3.2000	32.65
16	FRKRLRQWM	268	3.1800	32.45
17	WIFLQIYNA	174	3.1500	32.14
18	MVGRNVLHA	104	3.1000	31.63
19	LGSYAINPA	409	2.9500	30.10
20	LQIYNAWFD	177	2.9000	29.59
21	YRRLVNQGY	687	2.9000	29.59
22	WARLGTENV	42	2.8600	29.18
23	LRLGNTTSL	883	2.8600	29.18
24	YFRMVGRNV	101	2.8000	28.57
25	LFGATYLVL	341	2.8000	28.57
26	LVNSDYLNG	480	2.8000	28.57
27	WLRGNTTTS	882	2.8000	28.57
28	WTQWIFLQI	171	2.7000	27.55
29	YVLAGYGTG	429	2.7000	27.55
30	LVNQGYIQA	690	2.7000	27.55
31	VQMLAPLAP	867	2.7000	27.55
32	WMMRITAYA	275	2.6600	27.14
33	YRRAIAAKS	386	2.6000	26.53
34	VGAYRFLQR	783	2.6000	26.53
35	YGTGAIMAV	434	2.5500	26.02
36	IAAYRRAIA	383	2.5000	25.51
37	YSRFWHKVL	667	2.5000	25.51
38	LIEYTNHLT	843	2.5000	25.51

39	MFPYPSGEG	75	2.4000	24.49
40	YPSGEGLHV	78	2.4000	24.49
41	YLNQMSVPA	485	2.4000	24.49
42	LVQMLAPLA	866	2.4000	24.49
43	VQAFLAGAT	944	2.4000	24.49
44	LAGYGTGAI	431	2.3600	24.08
45	LVYRADSLV	231	2.3000	23.47
46	LVLAPEHDL	347	2.2000	22.45
47	YVGGAEHAV	654	2.2000	22.45
48	VLHALGFDA	109	2.1000	21.43
49	VVGAYRFLQ	782	2.1000	21.43
50	WRLVVDEHT	793	2.1000	21.43
51	VVAGRLVNL	958	2.1000	21.43
52	VNWCPGLGT	239	2.0000	20.41
53	VPIFIADYV	422	2.0000	20.41
54	IFIADYVLA	424	2.0000	20.41
55	LKPYSRDTN	594	2.0000	20.41
56	FLQIYNAWF	176	1.9000	19.39
57	VYRADSLVN	232	1.9000	19.39
58	VALFSARAA	314	1.9000	19.39
59	FQEFQKIGK	733	1.9000	19.39
60	FAALRNNTA	831	1.9000	19.39
61	MRITAYADR	277	1.8000	18.37
62	LRYTDPHNS	615	1.8000	18.37
63	WIGRSTGAV	306	1.7600	17.96
64	VRGRVVVAA	919	1.6000	16.33
65	WCPGLGTVL	241	1.5000	15.31
66	FIADYVLAG	425	1.5000	15.31
67	FYRWTQWIF	168	1.4000	14.29
68	WDFARAFGL	450	1.4000	14.29
69	VEVIAGGNI	461	1.4000	14.29
70	VGRNVLHAL	105	1.3000	13.27
71	FRRQLGRLG	144	1.3000	13.27
72	FLGSYAINP	408	1.3000	13.27

73	IERGDRFVY	715	1.3000	13.27
74	WVHVLDLDLG	583	1.2000	12.24
75	VLYDLGHVS	674	1.2000	12.24
76	LHVGHPLGY	84	1.1000	11.22
77	ITAYADRLL	279	1.1000	11.22
78	LWLRLGNTT	881	1.1000	11.22
79	LGNTTSLAH	885	1.1000	11.22
80	VIVVAGRLV	956	1.1000	11.22
81	YNAWFDTTA	180	1.0000	10.20
82	LVNWCPGLG	238	1.0000	10.20
83	LRQWMMRIT	272	1.0000	10.20
84	LNGMSVPAA	486	1.0000	10.20
85	VLHLLYSRF	662	1.0000	10.20
86	VNFRRQLGR	142	0.9000	9.18
87	YRADSLVNW	233	0.9000	9.18
88	FGLPIVEVI	456	0.9000	9.18
89	LFARQRYWG	520	0.9000	9.18
90	LGTFNVPNP	45	0.8000	8.16
91	FNVNPVGS	48	0.8000	8.16
92	LWTYGGGTP	371	0.8000	8.16
93	LYSRFWHKV	666	0.8000	8.16
94	FWHKVLYDL	670	0.8000	8.16
95	VEPLVQMLA	863	0.8000	8.16
96	FGATYLVLA	342	0.7000	7.14

ALLELE: DRB1_1506		Threshold for 3 % with score: 3.1	Highest Score achievable by any peptide: 9.8	
Rank	Sequence	At Position	Score	% of Highest Score
1	LQRVWRLVV	789	5.3000	54.08
2	FRMVGRNVL	102	5.0000	51.02
3	VVNFRRQLG	141	4.9000	50.00
4	LRVYEMSMG	761	4.8000	48.98
5	VKTMQRNWI	299	4.5000	45.92

6	IQAYAYTDA	696	4.3000	43.88
7	IVVAGRLVN	957	4.3000	43.88
8	LRALHRTIV	817	4.2000	42.86
9	YARYFRMVG	98	4.1000	41.84
10	MVGRNVLHA	104	4.1000	41.84
11	LGSYAINPA	409	3.9500	40.31
12	LQIYNAWFD	177	3.9000	39.80
13	LRLGNTTSL	883	3.8600	39.39
14	LFGATYLVL	341	3.8000	38.78
15	LVNSDYLNG	480	3.8000	38.78
16	LVNQGYIQA	690	3.7000	37.76
17	VQMLAPLAP	867	3.7000	37.76
18	VGAYRFLQR	783	3.6000	36.73
19	IAAYRRAIA	383	3.5000	35.71
20	LIEYTNHLT	843	3.5000	35.71
21	MFPYPSGEG	75	3.4000	34.69
22	LVQMLAPLA	866	3.4000	34.69
23	VQAFLAGAT	944	3.4000	34.69
24	LAGYGTGAI	431	3.3600	34.29
25	LVYRADSLV	231	3.3000	33.67
26	LVLAPEHDL	347	3.2000	32.65
27	VLHALGFDA	109	3.1000	31.63
28	YRLVYRADS	229	3.1000	31.63
29	VVGAYRFLQ	782	3.1000	31.63
30	VVAGRLVNL	958	3.1000	31.63
31	VNWCPLGT	239	3.0000	30.61
32	VPIFIADYV	422	3.0000	30.61
33	IFIADYVLA	424	3.0000	30.61
34	LKPYSRDTN	594	3.0000	30.61
35	VYRADSLVN	232	2.9000	29.59
36	VALFSARAA	314	2.9000	29.59
37	MRITAYADR	277	2.8000	28.57
38	FARAFGLPI	452	2.8000	28.57
39	FKLRDWLFA	514	2.8000	28.57

40	LRYTDPHNS	615	2.8000	28.57
41	YRFLQRVWR	786	2.8000	28.57
42	YRYTAELAA	24	2.6000	26.53
43	VRGRVVVAA	919	2.6000	26.53
44	YRWTQWIFL	169	2.5000	25.51
45	VEVIAGGNI	461	2.4000	24.49
46	VGRNVLHAL	105	2.3000	23.47
47	IERGDRFVY	715	2.3000	23.47
48	VLYDLGHVS	674	2.2000	22.45
49	FRKRLRQWM	268	2.1800	22.24
50	WIFLQIYNA	174	2.1500	21.94
51	LHVGHPLGY	84	2.1000	21.43
52	ITAYADRLI	279	2.1000	21.43
53	LWLRLGNTT	881	2.1000	21.43
54	LGNTTSLAH	885	2.1000	21.43
55	VIVVAGRLV	956	2.1000	21.43
56	LVNWCPLGL	238	2.0000	20.41
57	LRQWMMRIT	272	2.0000	20.41
58	LNGMSVPAA	486	2.0000	20.41
59	VLHLLYSRF	662	2.0000	20.41
60	VNFRRQLGR	142	1.9000	19.39
61	LFARQRYWG	520	1.9000	19.39
62	YRRLVNQGY	687	1.9000	19.39
63	WARLGTFFV	42	1.8600	18.98
64	LGTFNPNP	45	1.8000	18.37
65	YFRMVGRNV	101	1.8000	18.37
66	LWTYGGGTP	371	1.8000	18.37
67	LYSRFWHKV	666	1.8000	18.37
68	VEPLVQMLA	863	1.8000	18.37
69	WLRLGNTTS	882	1.8000	18.37
70	WTQWIFLQI	171	1.7000	17.35
71	YVLAGYGTG	429	1.7000	17.35
72	VLAGYGTGA	430	1.7000	17.35
73	VEVFQEF GK	730	1.7000	17.35

74	VGVSEDFAA	825	1.7000	17.35
75	MLAPLAPHI	869	1.7000	17.35
76	WMMRITAYA	275	1.6600	16.94
77	VGHPLGYIA	86	1.6000	16.33
78	YRRAIAAKS	386	1.6000	16.33
79	LPIVEVIAG	458	1.6000	16.33
80	VNGKVRGRV	915	1.6000	16.33
81	VNSDYLNGM	481	1.5800	16.12
82	YGTGAIMAV	434	1.5500	15.82
83	YSRFWHKVL	667	1.5000	15.31
84	VNPLWTYGG	368	1.4600	14.90
85	MQRNWIGRS	302	1.4500	14.80
86	VPRYRYTAE	21	1.4000	14.29
87	YPSGEGLVH	78	1.4000	14.29
88	IGRSTGAVA	307	1.4000	14.29
89	VIAGGNISE	463	1.4000	14.29
90	YLNMGMSVPA	485	1.4000	14.29
91	LTAGERADV	217	1.3000	13.27
92	LESAGRGRA	502	1.3000	13.27
93	VYEMSMGPL	763	1.3000	13.27
94	VIDEYRLVY	225	1.2000	12.24
95	MMRITAYAD	276	1.2000	12.24
96	LVAASWPAG	359	1.2000	12.24

ALLELE: DRB5_0101	Threshold for 3 % with score: 2.3	Highest Score achievable by any peptide: 9.8
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Rank	Sequence	At Position	Score	% of Highest Score
1	FRMVGRNVL	102	5.2000	53.06
2	MRITAYADR	277	4.5000	45.92
3	YRFLQRVWR	786	4.5000	45.92
4	LRYTDPHNS	615	4.4000	44.90
5	YRRLVNQGY	687	4.2000	42.86
6	YFRMVGRNV	101	4.0000	40.82

7	YIATDVYAR	92	3.8000	38.78
8	WAKLTAGER	214	3.7000	37.76
9	YRLVYRADS	229	3.7000	37.76
10	FRRQLGRLG	144	3.6000	36.73
11	YRRAIAAKS	386	3.6000	36.73
12	YRWTQWIFL	169	3.3000	33.67
13	YVLAGYGTG	429	3.1000	31.63
14	YAYTDARGS	699	3.1000	31.63
15	LRNNTATAK	834	3.0000	30.61
16	IMAVPGHDQ	439	2.8000	28.57
17	FGKIGKSLK	736	2.8000	28.57
18	VQDMFPYPS	72	2.7000	27.55
19	LVLAPEHDL	347	2.6000	26.53
20	LERQESREK	396	2.6000	26.53
21	VIVVAGRLV	956	2.5000	25.51
22	VEVIAGGNI	461	2.4000	24.49
23	WIFLQIYNA	174	2.3000	23.47
24	WDFARAFGL	450	2.3000	23.47
25	IEYTNHLTK	844	2.3000	23.47
26	FLQIYNAWF	176	2.2000	22.45
27	VKTMQRNWI	299	2.2000	22.45
28	FARAFGLPI	452	2.2000	22.45
29	VVGAYRFLQ	782	2.2000	22.45
30	LVQMLAPLA	866	2.2000	22.45
31	VQMLAPLAP	867	2.2000	22.45
32	WLRLGNTTS	882	2.0000	20.41
33	YRYTAELAA	24	1.9000	19.39
34	WARLGTFFNV	42	1.8000	18.37
35	MMRITAYAD	276	1.8000	18.37
36	FQEFGKIGK	733	1.8000	18.37
37	FPVFRKRLR	265	1.7000	17.35
38	LLYSRFWHK	665	1.7000	17.35
39	IVEVIAGGN	460	1.6000	16.33
40	VNPLWTYGG	368	1.5000	15.31

41	LHLLYSRFW	663	1.5000	15.31
42	VLHALGFDA	109	1.4000	14.29
43	LVNWCPGLG	238	1.4000	14.29
44	LPIVEVIAG	458	1.4000	14.29
45	IDTLRALHR	814	1.4000	14.29
46	LRLGNTTSL	883	1.4000	14.29
47	LGNTTSLAH	885	1.4000	14.29
48	WVHVLDLDL	583	1.3000	13.27
49	LAPLAPHIA	870	1.3000	13.27
50	VEVFQEF GK	730	1.2000	12.24
51	WRLVVDEHT	793	1.2000	12.24
52	FDTTANKAR	184	1.1000	11.22
53	FLGSYAINP	408	1.1000	11.22
54	LVNSDY LNG	480	1.1000	11.22
55	VSSREPYRR	681	1.1000	11.22
56	LVNQGYIQA	690	1.1000	11.22
57	LQRVWRLVV	789	1.1000	11.22
58	VDRLESAGR	499	1.0000	10.20
59	WLFARQRYW	519	1.0000	10.20
60	VMPQWAGSS	603	1.0000	10.20
61	WMGPRPAEH	635	1.0000	10.20
62	LFVQDMFPY	70	0.9000	9.18
63	LFGATYLV L	341	0.9000	9.18
64	IVVAGRLVN	957	0.9000	9.18
65	LHVGHPLGY	84	0.8000	8.16
66	VVNFRRQLG	141	0.8000	8.16
67	VLHLLYSRF	662	0.8000	8.16
68	YSRFWHKVL	667	0.8000	8.16
69	LGHVSSREP	678	0.8000	8.16
70	YIQAYAYTD	695	0.8000	8.16
71	VYEMSMGPL	763	0.8000	8.16
72	LHRTIVGVS	820	0.8000	8.16
73	FPKADAAYL	896	0.8000	8.16
74	VYRADSLVN	232	0.7000	7.14

75	VALFSARAA	314	0.7000	7.14
76	FLAGATPRK	947	0.7000	7.14
77	LGYIATDVY	90	0.6000	6.12
78	VNFRRQLGR	142	0.6000	6.12
79	LRALHRTIV	817	0.6000	6.12
80	LGTVLANEE	245	0.5000	5.10
81	WGEPFPIVY	527	0.5000	5.10
82	WAGSSWYEL	607	0.5000	5.10
83	VLYDLGHVS	674	0.5000	5.10
84	LAGATPRKV	948	0.5000	5.10
85	FNVPNPVGS	48	0.4000	4.08
86	FYRWTQWIF	168	0.4000	4.08
87	FRKRLRQWM	268	0.4000	4.08
88	VGSLAPPDG	54	0.3000	3.06
89	WFDTTANKA	183	0.3000	3.06
90	FPIVYDSDG	531	0.3000	3.06
91	VGAYRFLQR	783	0.3000	3.06
92	YGADTLRVY	756	0.2000	2.04
93	YTNHLTKKH	846	0.2000	2.04
94	VFTTRPDTL	333	0.1000	1.02
95	VYDSDGRPH	534	0.1000	1.02
96	YVPAEQVIE	708	0.1000	1.02

ALLELE: DRB5_0105	Threshold for 3 % with score: 2.3	Highest Score achievable by any peptide: 9.8		
Rank	Sequence	At Position	Score	% of Highest Score
1	FRMVGRNVL	102	5.2000	53.06
2	MRITAYADR	277	4.5000	45.92
3	YRFLQRVWR	786	4.5000	45.92
4	LRYTDPHNS	615	4.4000	44.90
5	YRRLVNQGY	687	4.2000	42.86
6	YFRMVGRNV	101	4.0000	40.82
7	YIATDVYAR	92	3.8000	38.78

8	WAKLTAGER	214	3.7000	37.76
9	YRLVYRADS	229	3.7000	37.76
10	FRRQLGRLG	144	3.6000	36.73
11	YRRAIAAKS	386	3.6000	36.73
12	YRWTQWIFL	169	3.3000	33.67
13	YVLAGYGTG	429	3.1000	31.63
14	YAYTDARGS	699	3.1000	31.63
15	LRNNTATAK	834	3.0000	30.61
16	IMAVPGHDQ	439	2.8000	28.57
17	FGKIGKSLK	736	2.8000	28.57
18	VQDMFPYPS	72	2.7000	27.55
19	LVLAPEHDL	347	2.6000	26.53
20	LERQESREK	396	2.6000	26.53
21	VIVVAGRLV	956	2.5000	25.51
22	VEVIAGGNI	461	2.4000	24.49
23	WIFLQIYNA	174	2.3000	23.47
24	WDFARAFGL	450	2.3000	23.47
25	IEYTNHLTK	844	2.3000	23.47
26	FLQIYNAWF	176	2.2000	22.45
27	VKTMQRNWI	299	2.2000	22.45
28	FARAFGLPI	452	2.2000	22.45
29	VVGAYRFLQ	782	2.2000	22.45
30	LVQMLAPLA	866	2.2000	22.45
31	VQMLAPLAP	867	2.2000	22.45
32	WLRLGNTTS	882	2.0000	20.41
33	YRYTAELAA	24	1.9000	19.39
34	WARLGTENV	42	1.8000	18.37
35	MMRITAYAD	276	1.8000	18.37
36	FQEFKIGK	733	1.8000	18.37
37	FPVFRKRLR	265	1.7000	17.35
38	LLYSRFWHK	665	1.7000	17.35
39	IVEVIAGGN	460	1.6000	16.33
40	VNPLWTYGG	368	1.5000	15.31
41	LHLLYSRFW	663	1.5000	15.31

42	VLHALGFDA	109	1.4000	14.29
43	LVNWCPGLG	238	1.4000	14.29
44	LPIVEVIAG	458	1.4000	14.29
45	IDTLRALHR	814	1.4000	14.29
46	LRLGNTTSL	883	1.4000	14.29
47	LGNTTSLAH	885	1.4000	14.29
48	WVHVDLDLG	583	1.3000	13.27
49	LAPLAPHIA	870	1.3000	13.27
50	VEVFQEF GK	730	1.2000	12.24
51	WRLVVDEHT	793	1.2000	12.24
52	FDTTANKAR	184	1.1000	11.22
53	FLGSYAINP	408	1.1000	11.22
54	LVNSDY LNG	480	1.1000	11.22
55	VSSREPYRR	681	1.1000	11.22
56	LVNQGYIQA	690	1.1000	11.22
57	LQRVWRLVV	789	1.1000	11.22
58	VDRLESAGR	499	1.0000	10.20
59	WLFARQRYW	519	1.0000	10.20
60	VMPQWAGSS	603	1.0000	10.20
61	WMGPRPAEH	635	1.0000	10.20
62	LFVQDMFPY	70	0.9000	9.18
63	LFGATYLV L	341	0.9000	9.18
64	IVVAGRLVN	957	0.9000	9.18
65	LHVGHPLGY	84	0.8000	8.16
66	VVNFRRQLG	141	0.8000	8.16
67	VLHLLYSRF	662	0.8000	8.16
68	YSRFWHKVL	667	0.8000	8.16
69	LGHVSSREP	678	0.8000	8.16
70	YIQAYAYTD	695	0.8000	8.16
71	VYEMSMGPL	763	0.8000	8.16
72	LHRTIVGVS	820	0.8000	8.16
73	FPKADAAYL	896	0.8000	8.16
74	VYRADSLVN	232	0.7000	7.14
75	VALFSARAA	314	0.7000	7.14

76	FLAGATPRK	947	0.7000	7.14
77	LGYIATDVY	90	0.6000	6.12
78	VNFRRQLGR	142	0.6000	6.12
79	LRALHRTIV	817	0.6000	6.12
80	LGTVLANEE	245	0.5000	5.10
81	WGEPFPIVY	527	0.5000	5.10
82	WAGSSWYEL	607	0.5000	5.10
83	VLYDLGHVS	674	0.5000	5.10
84	LAGATPRKV	948	0.5000	5.10
85	FNVPNPVGS	48	0.4000	4.08
86	FYRWTQWIF	168	0.4000	4.08
87	FRKRLRQWM	268	0.4000	4.08
88	VGSLAPPDG	54	0.3000	3.06
89	WFDTTANKA	183	0.3000	3.06
90	FPIVYDSDG	531	0.3000	3.06
91	VGAYRFLQR	783	0.3000	3.06
92	YGADTLRVY	756	0.2000	2.04
93	YTNHLTKKH	846	0.2000	2.04
94	VFTTRPDTL	333	0.1000	1.02
95	VYDSDGRPH	534	0.1000	1.02
96	YVPAEQVIE	708	0.1000	1.02