

**Supplementary 1.** Uniprot ID of the sequence was used in the epitope-conservancy analysis

<b>No</b>	<b>Uniprot ID</b>
1	Q9W7S2
2	Q8JJ51
3	Q2EI26
4	P83512
5	P15167
6	Q8QG89
7	Q90220
8	Q92031
9	Q90392
10	Q92032
11	P28891
12	Q9PW35
13	C9E1S1
14	Q7SZE0
15	B7U492
16	Q9IAB0
17	E9NW26
18	Q5XUW8
19	Q805F4
20	Q9PW36
21	P30403
22	POC6E4

**Supplementary 2.** Epitope was bound with MHCs and their characteristics

No	Peptide	Allele	Proteasome Score	TAP Score	MHC Score	Processing Score	Total Score	MHC IC50
1	1-MIEVLLVTI-9	HLA-A*32:01	1.41	0.2	-1.93	1.61	-0.32	85
2	3-EVLLVTICL-11	HLA-A*68:02	1.8	0.4	-2.2	2.2	0	158.3
3	4-VLLVTICLA-12	HLA-A*02:01	1.16	-0.26	-2.24	0.9	-1.34	173.6
4		HLA-A*02:01	1.15	-0.17	-2.11	0.98	-1.13	128.6
	5-LLVTICLAA-13	HLA-A*02:06	1.15	-0.17	-2.21	0.98	-1.23	162.5
5		HLA-B*15:25	1.15	1.17	-2.01	2.32	0.31	101.2
	6-LVTICLAAF-14	HLA-B*15:01	1.15	1.17	-2.08	2.32	0.24	120.3
		HLA-A*29:02	0.92	1.34	-1.61	2.26	0.65	40.5
6		HLA-A*11:01	0.92	1.34	-1.91	2.26	0.35	80.7
		HLA-B*15:25	0.92	1.34	-2.11	2.26	0.15	127.9
	8-TICLAAFPY-16	HLA-B*15:02	0.92	1.34	-2.3	2.26	-0.05	200.2
7	13-AFPYQGSSI-21	HLA-C*14:02	0.99	0.43	-2	1.41	-0.58	98.9
		HLA-B*51:01	0.84	0.21	-1.4	1.04	-0.35	24.9
		HLA-B*53:01	0.84	0.21	-1.4	1.04	-0.36	25.4
		HLA-B*55:01	0.84	0.21	-1.49	1.04	-0.45	31
		HLA-B*07:02	0.84	0.21	-1.61	1.04	-0.56	40.5
8		HLA-B*35:03	0.84	0.21	-1.66	1.04	-0.62	46.2
		HLA-B*56:01	0.84	0.21	-1.73	1.04	-0.68	53.2
		HLA-B*39:01	0.84	0.21	-2.26	1.04	-1.22	183.5
		HLA-C*12:03	0.84	0.21	-1.42	1.04	-0.37	26.2
	14-FPYQGSSII-22	HLA-C*03:03	0.84	0.21	-1.64	1.04	-0.6	44
9	15-PYQGSSIIL-23	HLA-C*14:02	1.58	0.26	-2.09	1.84	-0.25	123.3
10	23-LESGNVNDY-31	HLA-B*18:01	1.11	1.21	-2.34	2.33	-0.01	217.5
11	27-NVNDYEVVY-35	HLA-B*15:02	1.45	1.29	-2.31	2.74	0.43	204.7
12	29-NDYEVVYPR-37	HLA-A*68:01	0.79	0.63	-1.38	1.41	0.03	24.1
		HLA-B*40:02	1.22	0.14	-1.83	1.36	-0.47	67.6
13		HLA-B*49:01	1.22	0.14	-2.16	1.36	-0.8	144.5
	31-YEVVYPRKI-39	HLA-B*40:01	1.22	0.14	-2.33	1.36	-0.97	212.6
14	33-VVYPRKITA-41	HLA-C*12:03	1.15	-0.14	-2.35	1.02	-1.33	222.6
		HLA-A*24:02	1.54	0.57	-2.05	2.11	0.06	112.2
15	34-VYPRKITAL-42	HLA-C*14:02	1.54	0.57	-0.84	2.11	1.28	6.9
		HLA-B*55:01	0.8	-1.08	-1.64	-0.28	-1.92	44.1
16		HLA-B*56:01	0.8	-1.08	-1.97	-0.28	-2.25	93.5
	35-YPRKITALS-43	HLA-B*07:02	0.8	-1.08	-2.2	-0.28	-2.48	159.1
		HLA-B*44:03	1.49	1.18	-2.02	2.67	0.65	103.9
17	43-SEGAAQQKY-51	HLA-B*44:02	1.49	1.18	-2.06	2.67	0.61	115
		HLA-C*05:01	1.4	1	-1.62	2.4	0.77	42
18		HLA-B*18:01	1.4	1	-1.68	2.4	0.71	48.1
		HLA-B*40:01	1.4	1	-1.95	2.4	0.45	88.8
	51-YEDTMQYEF-59	HLA-B*40:02	1.4	1	-2.11	2.4	0.29	127.5
19	77-FAKDYSETH-85	HLA-C*12:03	1.18	-0.23	-1.39	0.95	-0.44	24.7

		HLA-C*03:03	1.18	-0.23	-1.74	0.95	-0.79	54.8
20	83-ETHYSPDGT-91	HLA-A*68:02	1.01	-0.37	-1.58	0.64	-0.94	38.1
21	86-YSPDGTRIT-94	HLA-C*12:03	0.97	-0.31	-2.19	0.65	-1.53	154.7
22	90-GTRITTYPS-98	HLA-A*30:01	0.58	-1.1	-1.58	-0.52	-2.1	38.1
23	91-TRITTYPSV-99	HLA-C*14:02	1.26	0.23	-2.35	1.5	-0.85	223
24	96-YPSVEDHCY-104	HLA-B*53:01	1.46	1.13	-1.68	2.59	0.91	47.6
25	128-HFKFHGERY-136	HLA-A*29:02	1.49	1.29	-2.03	2.78	0.74	108
		HLA-C*12:03	1.09	1.12	-1.64	2.21	0.58	43.3
26		HLA-C*06:02	1.09	1.12	-2.04	2.21	0.17	109.8
	129-FKFHGERYF-137	HLA-C*07:02	1.09	1.12	-2.31	2.21	-0.1	205.8
27	130-KFHGERYFI-138	HLA-A*30:01	1.26	0.32	-1.16	1.58	0.42	14.3
		HLA-B*40:02	1.16	0.29	-0.87	1.45	0.58	7.4
28	133-GERYFIEPL-141	HLA-B*40:01	1.16	0.29	-1.15	1.45	0.3	14.2
29	134-ERYFIEPLK-142	HLA-A*68:01	0.69	0.27	-2.34	0.96	-1.38	219.2
		HLA-A*23:01	1.41	0.61	-1.5	2.02	0.52	32
30		HLA-A*24:02	1.41	0.61	-1.88	2.02	0.14	75.3
	135-RYFIEPLKL-143	HLA-C*14:02	1.41	0.61	-1.81	2.02	0.21	64.5
31	145-GSEAHAVYK-153	HLA-A*11:01	0.99	0.02	-1.7	1	-0.7	50.5
		HLA-A*30:02	1.41	1.23	-2.3	2.64	0.34	200.8
		HLA-B*44:03	1.41	1.23	-1.29	2.64	1.35	19.7
32		HLA-B*18:01	1.41	1.23	-1.44	2.64	1.2	27.8
	146-SEAHAVYKY-154	HLA-B*44:02	1.41	1.23	-1.48	2.64	1.16	30.5
		HLA-A*68:02	1.05	0.32	-2.03	1.37	-0.66	106.8
33	149-HAVYKYENI-157	HLA-C*03:03	1.05	0.32	-2.17	1.37	-0.81	149.6
34	151-VYKYENIEK-159	HLA-A*30:01	1.09	0.41	-1.7	1.5	-0.19	49.7
35	152-YKYENIEKE-160	HLA-C*12:03	0.77	-0.56	-2.26	0.21	-2.05	180.5
36	162-ETPKMCGVI-170	HLA-A*68:02	0.95	0.07	-2.07	1.02	-1.05	116.8
		HLA-A*32:01	1.41	0.42	-1.63	1.83	0.2	42.6
37		HLA-B*58:01	1.41	0.42	-1.46	1.83	0.37	28.7
	165-KMCGVIQKW-173	HLA-B*57:01	1.41	0.42	-1.92	1.83	-0.09	82.4
38	172-KWKSDELIC-180	HLA-A*30:01	0.93	0.33	-1.9	1.26	-0.64	79.1
		HLA-B*44:02	1.5	1.19	-2.24	2.69	0.45	172.5
39		HLA-B*44:03	1.5	1.19	-2.35	2.69	0.34	225.1
	192-QESPQAKVY-200	HLA-B*18:01	1.5	1.19	-2.38	2.69	0.31	239.5
40	193-ESPQAKVYL-201	HLA-A*68:02	1.56	0.32	-1.88	1.88	0.01	75.1
41	201-LVIVADKSM-209	HLA-B*15:25	1.18	0.2	-2.37	1.38	-0.99	233.9
42	209-MVDKHNGNI-217	HLA-C*05:01	0.89	0.26	-1.55	1.15	-0.4	35.7
		HLA-A*29:02	1.5	1.29	-1.57	2.79	1.22	37.4
		HLA-A*01:01	1.5	1.29	-2.23	2.79	0.56	168.9
		HLA-A*30:02	1.5	1.29	-2.23	2.79	0.56	171
43		HLA-A*68:01	1.5	1.29	-2.27	2.79	0.52	186.3
		HLA-B*15:25	1.5	1.29	-2.17	2.79	0.62	148.1
		HLA-B*15:02	1.5	1.29	-2.22	2.79	0.57	165.1
	227-MVNTMNECY-235	HLA-B*15:01	1.5	1.29	-2.37	2.79	0.42	234.8

		HLA-B*15:25	0.77	0.2	-1.41	0.97	-0.44	25.5
44		HLA-B*15:02	0.77	0.2	-1.55	0.97	-0.59	35.8
		HLA-B*15:01	0.77	0.2	-1.7	0.97	-0.73	49.6
	230-TMNECYRPM-238	HLA-C*14:02	0.77	0.2	-1.69	0.97	-0.72	49.3
		HLA-B*58:01	1.65	0.48	-1.4	2.13	0.72	25.4
45		HLA-B*57:01	1.65	0.48	-2.13	2.13	-0.01	135.4
	242-IIMAGIECW-250	HLA-B*53:01	1.65	0.48	-2.36	2.13	-0.24	231.7
46	247-IECWTTNDF-255	HLA-B*18:01	1.08	1.04	-2.37	2.13	-0.25	235.9
		HLA-A*02:06	0.91	0.1	-0.85	1.01	0.16	7.1
		HLA-A*68:02	0.91	0.1	-0.88	1.01	0.13	7.6
47		HLA-A*02:01	0.91	0.1	-1.8	1.01	-0.79	62.4
	250-WTTNDFFEV-258	HLA-C*15:02	0.91	0.1	-2.09	1.01	-1.08	123.5
		HLA-A*68:01	1.15	0.12	-0.91	1.27	0.36	8.2
48		HLA-A*11:01	1.15	0.12	-0.95	1.27	0.32	8.9
	251-TTNDFFFEVK-259	HLA-A*31:01	1.15	0.12	-2.15	1.27	-0.88	142.8
		HLA-A*30:02	1.3	1.35	-2.06	2.66	0.6	114.6
49		HLA-B*58:01	1.3	1.35	-1.73	2.66	0.92	54.1
	259-KSSAKETLY-267	HLA-B*57:01	1.3	1.35	-2.37	2.66	0.28	236
		HLA-B*15:25	1.31	1.17	-1.64	2.48	0.84	43.3
50		HLA-B*15:02	1.31	1.17	-1.76	2.48	0.72	57
	261-SAKETLYSF-269	HLA-B*15:01	1.31	1.17	-1.84	2.48	0.64	68.8
		HLA-B*58:01	1.45	0.34	-1.75	1.78	0.04	55.6
51	264-ETLYSFAKW-272	HLA-B*57:01	1.45	0.34	-2.09	1.78	-0.31	122.6
		HLA-A*68:01	0.97	0.65	-1.49	1.62	0.13	30.9
52		HLA-A*31:01	0.97	0.65	-1.54	1.62	0.08	34.8
	265-TLYSFAKWR-273	HLA-A*03:01	0.97	0.65	-2.09	1.62	-0.47	123
53	266-LYSFAKWRV-274	HLA-A*24:02	1.23	0.25	-2.35	1.49	-0.86	224.2
54	267-YSFAKWRVE-275	HLA-C*12:03	0.97	-0.6	-2.29	0.37	-1.92	195.8
		HLA-B*08:01	1.2	0.42	-1.84	1.62	-0.22	69.5
		HLA-C*12:03	1.2	0.42	-1.81	1.62	-0.19	65.3
55		HLA-C*03:03	1.2	0.42	-1.91	1.62	-0.29	81.7
	269-FAKWRVEDL-277	HLA-C*06:02	1.2	0.42	-2.36	1.62	-0.74	230.9
56	271-KWRVEDLSK-279	HLA-A*30:01	0.8	0.44	-1.11	1.24	0.13	13
57	281-KPHNDAQFL-289	HLA-B*07:02	1.52	0.4	-2.28	1.92	-0.36	189.6
		HLA-B*15:25	1.23	1.18	-1.69	2.41	0.71	49.5
58	286-AQFLTNKDF-294	HLA-B*15:01	1.23	1.18	-1.95	2.41	0.46	89.2
59	303-FVGGICNEK-311	HLA-A*68:01	0.94	0.22	-1.51	1.16	-0.36	32.5
60	317-VQDHTKVPL-325	HLA-B*39:01	1.18	0.42	-2.22	1.6	-0.62	165.6
61	320-HTKVPLLMA-328	HLA-A*30:01	1.11	-0.34	-0.9	0.76	-0.13	7.9
		HLA-B*53:01	1.37	0.08	-2.23	1.45	-0.78	168.8
62		HLA-B*07:02	1.37	0.08	-2.28	1.45	-0.83	189.7
	323-VPLLMATM-331	HLA-B*35:03	1.37	0.08	-2.34	1.45	-0.9	219.6
		HLA-A*03:01	1.05	-0.26	-2.03	0.79	-1.24	107.9
63	325-LLMAITMGH-333	HLA-B*15:25	1.05	-0.26	-2.24	0.79	-1.45	174.7

		HLA-A*68:02	1.31	0.33	-1.6	1.63	0.04	39.6
		HLA-A*02:06	1.31	0.33	-2.3	1.63	-0.66	197.5
		HLA-B*53:01	1.31	0.33	-2.22	1.63	-0.59	166.5
64		HLA-B*58:01	1.31	0.33	-2.36	1.63	-0.72	226.8
		HLA-C*03:03	1.31	0.33	-1.54	1.63	0.09	35
		HLA-C*12:03	1.31	0.33	-2.26	1.63	-0.62	181.4
	327-MAITMGHEI-335	HLA-C*15:02	1.31	0.33	-2.4	1.63	-0.76	249.1
		HLA-B*40:01	1.06	0.05	-1.48	1.11	-0.37	30.1
65		HLA-B*40:02	1.06	0.05	-1.7	1.11	-0.59	50.2
	333-HEIGHNLGM-341	HLA-B*18:01	1.06	0.05	-2.09	1.11	-0.98	123.5
66	366-KFSDCSRNY-374	HLA-A*29:02	1.42	1.43	-2.07	2.85	0.78	118
		HLA-A*01:01	1.05	1.21	-0.76	2.27	1.51	5.7
67		HLA-C*05:01	1.05	1.21	-1.47	2.27	0.79	29.7
	367-FSDCSRNY-375	HLA-C*12:03	1.05	1.21	-1.72	2.27	0.54	52.9
68		HLA-C*06:02	1.78	0.49	-1.94	2.27	0.33	87.2
	371-SRNYQKFL-379	HLA-C*07:01	1.78	0.49	-2	2.27	0.27	99.7
		HLA-A*31:01	0.54	0.35	-1.61	0.88	-0.72	40.4
		HLA-A*03:01	0.54	0.35	-2.22	0.88	-1.33	164.2
69		HLA-A*11:01	0.54	0.35	-2.32	0.88	-1.44	210.9
	372-RNYQKFLK-380	HLA-A*30:01	0.54	0.35	-2.36	0.88	-1.48	230.3
70	374-YYQKFLKDR-382	HLA-A*31:01	0.85	0.8	-2.39	1.65	-0.74	243.9
		HLA-A*02:06	0.8	0.18	-2.09	0.98	-1.11	124.1
		HLA-A*32:01	0.8	0.18	-2.11	0.98	-1.13	128.4
71		HLA-A*68:02	0.8	0.18	-2.32	0.98	-1.34	207.1
		HLA-C*05:01	0.8	0.18	-1.17	0.98	-0.2	14.9
	393-RTDTVSTPV-401	HLA-C*15:02	0.8	0.18	-1.49	0.98	-0.52	31.2
72		HLA-B*07:02	1.08	0.33	-1.91	1.42	-0.49	80.6
	399-TPVSGNEPL-407	HLA-B*35:03	1.08	0.33	-2.25	1.42	-0.83	176.5
73	401-VSGNEPLEV-409	HLA-C*15:02	1.01	0.05	-1.66	1.06	-0.6	45.6
		HLA-A*26:01	1.49	1.29	-0.91	2.78	1.87	8.2
74		HLA-A*68:01	1.49	1.29	-1.32	2.78	1.46	21
	408-EVITMDDFY-416	HLA-A*29:02	1.49	1.29	-2.25	2.78	0.53	177.9

**Supplementary 3.** Epitop was bounded with HLA MHC II and their characteristic

No	Peptide	Core_peptide	Allele	IC50	Rank	Adjusted_rank
1	1-MIEVLLVTICLAAFP-15	LLVTICLAA	HLA-DPA1*01:03/DPB1*06:01	9.4	1.9	1.9
		LLVTICLAA	HLA-DQA1*01:02/DQB1*05:01	16.3	2.9	2.9
		VLLVTICLA	HLA-DQA1*02:01/DQB1*03:01	30.2	7.3	7.3
2	2-IEVLLVTICLAAFPY-16	LLVTICLAA	HLA-DPA1*01:03/DPB1*06:01	9	1.8	1.8
		LLVTICLAA	HLA-DQA1*01:02/DQB1*05:01	16	2.8	2.8
		VLLVTICLA	HLA-DQA1*02:01/DQB1*03:01	28.8	7.1	7.1
		LVTICLAAF	HLA-DQA1*02:01/DQB1*03:01	192.8	8.5	8.5
3	3-EVLLVTICLAAFPYQ-17	TICLAAFPY	HLA-DPA1*01:03/DPB1*02:01	9.7	1.9	1.9
		ICLAAFPYQ	HLA-DPA1*01:03/DPB1*06:01	9.7	1.9	1.9
		ICLAAFPYQ	HLA-DPA1*01:03/DPB1*02:01	102.8	4.5	4.5
		LLVTICLAA	HLA-DQA1*01:02/DQB1*05:01	25.2	5.7	5.7
		VTICLAAFP	HLA-DQA1*02:01/DQB1*03:01	25.3	6.4	6.4
4	4-VLLVTICLAAFPYQG-18	TICLAAFPY	HLA-DPA1*01:03/DPB1*06:01	9.8	1.9	1.9
		ICLAAFPYQ	HLA-DPA1*01:03/DPB1*06:01	9.8	1.9	1.9
		ICLAAFPYQ	HLA-DPA1*01:03/DPB1*02:01	127.1	5.7	5.7
		LVTICLAAF	HLA-DPA1*01:03/DPB1*02:01	26	5.9	5.9
		VLLVTICLA	HLA-DQA1*01:02/DQB1*05:01	26	5.9	5.9
		VTICLAAFP	HLA-DQA1*02:01/DQB1*03:03	160.1	9.9	9.9
		TICLAAFPY	HLA-DQA1*02:01/DQB1*03:01	25.8	6.5	6.5
5	5-LLVTICLAAFPYQGS-19	TICLAAFPY	HLA-DPA1*01:03/DPB1*06:01	9.5	1.9	1.9
		ICLAAFPYQ	HLA-DPA1*01:03/DPB1*06:01	9.5	1.9	1.9
		ICLAAFPYQ	HLA-DPA1*01:03/DPB1*02:01	138.3	6.3	6.3
		TICLAAFPY	HLA-DQA1*03:01/DQB1*03:01	149.6	6.8	6.8
		VTICLAAFP	HLA-DQA1*01:02/DQB1*05:01	34.2	8.3	8.3
		VTICLAAFP	HLA-DQA1*02:01/DQB1*03:01	40.5	8.9	8.9
6	6-LVTICLAAFPYQGSS-20	CLAAFPYQG	HLA-DRB1*10:01	58.6	9.6	9.6
		TICLAAFPY	HLA-DPA1*01:03/DPB1*06:01	8.6	1.7	1.7
		TICLAAFPY	HLA-DQA1*03:01/DQB1*03:01	139.6	6.2	6.2
		ICLAAFPYQ	HLA-DQA1*01:03/DPB1*02:01	162.2	7.4	7.4
		CLAAFPYQG	HLA-DRB1*10:01	48.4	7.8	7.8
7	7-VTICLAAFPYQGSSI-21	CLAAFPYQG	HLA-DRB1*04:04	117.4	9.4	9.4
		VTICLAAFP	HLA-DQA1*05:01/DQB1*03:02	185.2	3.3	3.3
		TICLAAFPY	HLA-DPA1*01:03/DPB1*06:01	21.3	4.4	4.4

		TICLAAFPY	HLA-DQA1*03:01/DQB1*03:01	123.6	5.4	5.4
		CLAAFPYQG	HLA-DRB1*10:01	40.5	6.2	6.2
		AAFPYQGSS	HLA-DQA1*05:01/DQB1*04:02	94.3	7.8	7.8
		AFPYQGSSI	HLA-DQA1*02:01/DQB1*03:03	147.2	9.2	9.2
		CLAAFPYQG	HLA-DPA1*01:03/DPB1*06:01	24.8	5	5
8	8-TICLAAFPYQGSSII-22	AAFPYQGSS	HLA-DQA1*05:01/DQB1*04:02	71.4	5.7	5.7
		CLAAFPYQG	HLA-DRB1*10:01	39.2	6.1	6.1
		CLAAFPYQG	HLA-DQA1*03:01/DQB1*03:01	149	6.8	6.8
		AAFPYQGSS	HLA-DQA1*05:01/DQB1*04:02	63.9	5	5
		CLAAFPYQG	HLA-DRB1*10:01	48.9	7.9	7.9
9	9-ICLAAFPYQGSSIIL-23	CLAAFPYQG	HLA-DQA1*03:01/DQB1*03:01	186.1	8.8	8.8
		CLAAFPYQG	HLA-DQA1*05:01/DQB1*03:01	140.4	8.9	8.9
		LAAFPYQGS	HLA-DRB1*15:01	137.5	9.5	9.5
		PYQGSSIIL	HLA-DRB1*09:01	96.1	9.6	9.6
		YQGSSIILE	HLA-DQA1*05:01/DQB1*03:02	199.7	3.9	3.9
10	10-CLAAFPYQGSSIILE-24	AAFPYQGSS	HLA-DQA1*05:01/DQB1*04:02	72.3	5.7	5.7
		PYQGSSIIL	HLA-DQA1*05:01/DQB1*03:01	95.2	6	6
		YQGSSIILE	HLA-DRB1*04:05	155.3	8.2	8.2
		PYQGSSIIL	HLA-DRB1*15:01	123.3	8.6	8.6
		YQGSSIILE	HLA-DQA1*03:01/DQB1*03:02	144.9	0.55	0.55
		YQGSSIILE	HLA-DQA1*05:01/DQB1*03:02	180.6	3.2	3.2
11	11-LAAFPYQGSSIILES-25	YQGSSIILE	HLA-DRB1*04:05	99.6	5.2	5.2
		YQGSSIILE	HLA-DQA1*05:01/DQB1*03:01	87.1	5.4	5.4
		AAFPYQGSS	HLA-DQA1*05:01/DQB1*04:02	76.7	6.2	6.2
		YQGSSIILE	HLA-DQA1*01:02/DQB1*06:02	180.1	6.3	6.3
		YQGSSIILE	HLA-DQA1*03:01/DQB1*03:02	184.7	0.96	0.96
12	12-AAFPYQGSSIILESG-26	QGSSIILES	HLA-DQA1*01:02/DQB1*06:02	82.2	2.1	2.1
		YQGSSIILE	HLA-DQA1*05:01/DQB1*03:02	197.2	3.8	3.8
		YQGSSIILE	HLA-DQA1*05:01/DQB1*03:01	84.7	5.3	5.3
		YQGSSIILE	HLA-DRB1*04:05	112	5.8	5.8
13	13-AFPYQGSSIILESGN-27	QGSSIILES	HLA-DQA1*01:02/DQB1*06:02	68	1.6	1.6
		YQGSSIILE	HLA-DRB1*04:05	112.2	5.9	5.9
		YQGSSIILE	HLA-DQA1*05:01/DQB1*03:01	96	6	6

14	14-FPYQGSSIILESGNV-28	QGSSIILES	HLA-DQA1*01:02/DQB1*06:02	68.1	1.6	1.6
		YQGSSIILE	HLA-DRB1*04:05	136.2	7.2	7.2
15	15-PYQGSSIILESGNVN-29	QGSSIILES	HLA-DQA1*05:01/DQB1*03:01	121.1	7.8	7.8
		QGSSIILES	HLA-DQA1*01:02/DQB1*06:02	101.7	3	3
16	16-YQGSSIILESGNVND-30	GSSIILESG	HLA-DQA1*01:02/DQB1*06:02	159.7	5.4	5.4
17	17-SGNVNDYEVVYPRKI-39	YEVVYPRKI	HLA-DRB1*07:01	13.4	1.2	1.2
18	18-GNVNDYEVVYPRKIT-40	YEVVYPRKI	HLA-DRB1*07:01	14.9	1.5	1.5
		YEVVYPRKI	HLA-DRB1*09:01	91.4	9.2	9.2
19	19-NVNDYEVVYPRKITA-41	YEVVYPRKI	HLA-DRB1*07:01	17.4	1.8	1.8
		EVVYPRKIT	HLA-DQA1*05:01/DQB1*04:02	83.6	6.8	6.8
20	20-VNDYEVVYPRKITAL-42	YEVVYPRKI	HLA-DRB1*09:01	83	8.2	8.2
		EVVYPRKIT	HLA-DRB1*07:01	15.8	1.6	1.6
21	21-NDYEVVYPRKITALS-43	EVVYPRKIT	HLA-DQA1*05:01/DQB1*04:02	68.2	5.4	5.4
		YEVVYPRKI	HLA-DRB1*09:01	78.7	7.7	7.7
22	22-DYEVVYPRKITALSE-44	YEVVYPRKI	HLA-DRB1*07:01	17.4	1.8	1.8
		EVVYPRKIT	HLA-DQA1*05:01/DQB1*04:02	61	4.7	4.7
23	23-YEVVYPRKITALSEGA-45	YEVVYPRKI	HLA-DRB1*09:01	85.4	8.6	8.6
		EVVYPRKIT	HLA-DRB1*08:01	150.8	9.4	9.4
24	24-EVVYPRKITALSEGA-46	YEVVYPRKI	HLA-DRB1*07:01	22.9	2.6	2.6
		PRKITALSE	HLA-DPA1*01:03/DPB1*03:01	144	4.5	4.5
25	25-VVYPRKITALSEGA-47	EVVYPRKIT	HLA-DQA1*05:01/DQB1*04:02	71.9	5.7	5.7
		PRKITALSE	HLA-DRB1*08:01	146.7	9.1	9.1
26	26-VYPRKITALSEGA-48	PRKITALSE	HLA-DPA1*01:03/DPB1*03:01	107.7	3.4	3.4
		YEVVYPRKI	HLA-DRB1*07:01	43.4	5.2	5.2
27	27-YPRKITALSEGA-49	EVVYPRKIT	HLA-DQA1*05:01/DQB1*04:02	79.6	6.4	6.4
		VVYPRKITA	HLA-DRB1*08:01	147.4	9.1	9.1
28	28-VVYPRKITALSEGA-47	PRKITALSE	HLA-DPA1*01:03/DPB1*03:01	75.2	2.6	2.6
		ITALSEGA	HLA-DRB1*08:02	169.6	4.6	4.6
29	29-VVYPRKITALSEGA-47	PRKITALSE	HLA-DPA1*01:03/DPB1*03:01	60.2	2.2	2.2
		ITALSEGA	HLA-DRB1*08:02	169.6	4.6	4.6
30	30-VYPRKITALSEGA-48	PRKITALSE	HLA-DPA1*01:03/DPB1*03:01	62	2.2	2.2
		ITALSEGA	HLA-DRB1*08:02	154.1	4	4
31	31-YPRKITALSEGA-49	ITALSEGA	HLA-DQA1*02:01/DQB1*03:01	35.8	8.2	8.2
		PRKITALSE	HLA-DPA1*01:03/DPB1*03:01	87.6	3	3
32	32-YPRKITALSEGA-49	ITALSEGA	HLA-DRB1*08:02	175.8	4.8	4.8



		ITALSEGAA	HLA-DQA1*02:01/DQB1*03:01	22	5.8	5.8
28	36- PRKITALSEGAAQK- 50	ITALSEGAA ITALSEGAA	HLA-DQA1*02:01/DQB1*03:01 HLA-DRB1*08:02	18.4 185	5 5.1	5 5.1
29	37- RKITALSEGAAQKY- 51	ITALSEGAA	HLA-DQA1*02:01/DQB1*03:01	17.7	4.8	4.8
30	38- KITALSEGAAQKYE- 52	ITALSEGAA	HLA-DQA1*02:01/DQB1*03:01	19.2	5.1	5.1
31	39- ITALSEGAAQKYED- 53	TALSEGAAQ	HLA-DQA1*02:01/DQB1*03:01	25	6.4	6.4
32	65- PVVLHLEKNKELFAK- 79	LEKNKELFA	HLA-DRB1*03:01	194.9	7.3	7.3
33	72- KNKELFAKDYSETHY- 86	FAKDYSETH	HLA-DRB3*01:01	152.1	5.2	5.2
34	73- NKELFAKDYSETHYS- 87	FAKDYSETH	HLA-DRB3*01:01	154.6	5.3	5.3
35	74- KELFAKDYSETHYSP- 88	FAKDYSETH	HLA-DRB3*01:01	185.2	6.1	6.1
36	80- DYSETHYSPDGTRIT-94	YSPDGTRIT	HLA-DRB3*01:01	67	2.8	2.8
37	81- YSETHYSPDGTRITT-95	YSPDGTRIT	HLA-DRB3*01:01	42.8	2	2
38	82- SETHYSPDGTRITTY-96	YSPDGTRIT	HLA-DRB3*01:01	34.4	1.6	1.6
39	83- ETHYSPDGTRITTY-97	YSPDGTRIT	HLA-DRB3*01:01	40.7	1.9	1.9
40	84- THYSPDGTRITTYPS-98	YSPDGTRIT	HLA-DRB3*01:01	62.6	2.6	2.6
41	85- HYSPDGTRITTYPSV-99	YSPDGTRIT	HLA-DRB3*01:01	117.2	4.4	4.4
42	87- SPDGTRITTYPSVED- 101	TRITTYPSV ITTYPSVED	HLA-DQA1*01:03/DQB1*06:03 HLA-DRB1*04:05	175.3 109.3	0.66 5.7	0.66 5.7
43	88- PDGTRITTYPSVEDH- 102	TRITTYPSV ITTYPSVED	HLA-DQA1*01:03/DQB1*06:03 HLA-DRB1*04:05	163.4 61.4	0.54 2.5	0.54 2.5
44	89- DGTRITTYPSVEDHC- 103	TRITTYPSV ITTYPSVED	HLA-DQA1*01:03/DQB1*06:03 HLA-DRB1*04:05	160.7 59.8	0.52 2.4	0.52 2.4
45	90- GTRITTYPSVEDHCY- 104	TRITTYPSV ITTYPSVED	HLA-DQA1*01:03/DQB1*06:03 HLA-DRB1*04:05	183.5 59.5	0.74 2.3	0.74 2.3
46	91- TRITTYPSVEDHCYY- 105	ITTYPSVED	HLA-DRB1*04:05	74	3.4	3.4
47	98- SVEDHCYYQGRIHND- 112	CYYQGRIHN	HLA-DQA1*05:01/DQB1*04:02	91.2	7.5	7.5
48		CYYQGRIHN	HLA-DQA1*05:01/DQB1*04:02	67.9	5.3	5.3

	99- VEDHCYYQGRIHNDA- 113	CYYQGRIHN	HLA-DRB1*08:01	128.9	7.9	7.9
49	100- EDHCYYQGRIHNDAD- 114	CYYQGRIHN	HLA- DQA1*05:01/DQB1*04:02	64.8	5.1	5.1
		CYYQGRIHN	HLA-DRB1*08:01	112	6.8	6.8
50	101- DHCYYQGRIHNDADS- 115	CYYQGRIHN	HLA- DQA1*05:01/DQB1*04:02	65.9	5.2	5.2
		CYYQGRIHN	HLA-DRB1*08:01	103.7	6.2	6.2
51	102- HCYYQGRIHNDADST- 116	CYYQGRIHN	HLA- DQA1*05:01/DQB1*04:02	71.3	5.6	5.6
		CYYQGRIHN	HLA-DRB1*08:01	107.4	6.5	6.5
52	121- TCNGLKGFHFKFHGER- 135	CNGLKGFHFK	HLA-DRB5*01:01	37	5.6	5.6
53	123- NGLKGFHFKFHGERYF- 137	GHFHFKHGER	HLA- DQA1*05:01/DQB1*04:02	80.3	6.4	6.4
		GHFHFKHGER	HLA- DQA1*05:01/DQB1*04:02	60.1	4.7	4.7
54	124- GLKGFHFKFHGERYFI- 138	FHGERYFIX	HLA- DPA1*01:03/DPB1*04:01	162.9	5.1	5.1
		FKFHGERYF	HLA- DPA1*01:03/DPB1*02:01	193.4	8.5	8.5
		FKFHGERYF	HLA-DRB1*15:01	122.3	8.6	8.6
		FKFHGERYF	HLA-DRB1*07:01	77.2	8.8	8.8
		FHGERYFIE	HLA- DPA1*01:03/DPB1*04:01	20	0.49	0.49
55	125- LKGHFHFKFHGERYFIE- 139	KFHGERYFI	HLA- DPA1*02:01/DPB1*01:01	103.8	1.9	1.9
		FHGERYFIE	HLA- DPA1*01:03/DPB1*02:01	55.2	2.2	2.2
		GHFHFKHGER	HLA- DQA1*05:01/DQB1*04:02	57.4	4.5	4.5
		HFKFHGERY	HLA-DRB1*16:02	197.9	9.8	9.8
		FHGERYFIE	HLA- DPA1*01:03/DPB1*04:01	16.6	0.37	0.37
56	126- KGFHFKFHGERYFIEP- 140	KFHGERYFI	HLA- DPA1*02:01/DPB1*01:01	104.7	2	2
		FHGERYFIE	HLA- DPA1*01:03/DPB1*02:01	52.2	2.1	2.1
		GHFHFKHGER	HLA- DQA1*05:01/DQB1*04:02	57.4	4.5	4.5
		FHGERYFIE	HLA- DPA1*01:03/DPB1*04:01	12.9	0.27	0.27
		KFHGERYFI	HLA- DPA1*02:01/DPB1*01:01	76.4	1.2	1.2
57	127- GHFKFHGERYFIEPL- 141	FHGERYFIE	HLA- DPA1*01:03/DPB1*02:01	48.3	1.9	1.9
		HGERYFIEP	HLA- DQA1*01:01/DQB1*05:01	191.3	3.7	3.7
		GHFHFKHGER	HLA- DQA1*05:01/DQB1*04:02	55.8	4.3	4.3
58	128- HFKFHGERYFIEPLK- 142	FHGERYFIE	HLA- DPA1*01:03/DPB1*04:01	11.9	0.22	0.22
		KFHGERYFI	HLA- DPA1*02:01/DPB1*01:01	59.8	0.68	0.68

		GERYFIEPL	HLA-DQA1*01:01/DQB1*05:01	61.5	0.91	0.91
		FHGERYFIE	HLA-DPA1*01:03/DPB1*02:01	38.7	1.3	1.3
		GERYFIEPL	HLA-DQA1*01:02/DQB1*05:02	192.3	2.7	2.7
		KFHGERYFI	HLA-DPA1*03:01/DPB1*04:02	152.5	7.3	7.3
		KFHGERYFI	HLA-DPA1*02:01/DPB1*01:01	41.9	0.31	0.31
		FHGERYFIE	HLA-DPA1*01:03/DPB1*04:01	16.2	0.35	0.35
		GERYFIEPL	HLA-DQA1*01:01/DQB1*05:01	40.9	0.49	0.49
		FHGERYFIE	HLA-DPA1*01:03/DPB1*02:01	34.5	1.2	1.2
59	129- FKFHGERYFIEPLKL- 143	GERYFIEPL	HLA-DQA1*01:02/DQB1*05:02	183.3	2.5	2.5
		RYFIEPLKL	HLA-DPA1*03:01/DPB1*04:02	79.1	3.3	3.3
		RYFIEPLKL	HLA-DRB1*07:01	30	3.6	3.6
		ERYFIEPLK	HLA-DPA1*01:03/DPB1*03:01	159.7	4.9	4.9
		RYFIEPLKL	HLA-DRB5*01:01	43.3	6.4	6.4
		HGERYFIEP	HLA-DPA1*01:03/DPB1*06:01	42.2	7.7	7.7
		GERYFIEPL	HLA-DQA1*01:01/DQB1*05:01	35.9	0.42	0.42
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*01:01	56.2	0.63	0.63
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*14:01	167.4	0.79	0.79
		YFIEPLKLP	HLA-DPA1*01:03/DPB1*02:01	37.3	1.2	1.2
		RYFIEPLKL	HLA-DPA1*03:01/DPB1*04:02	51.4	1.8	1.8
60	130- KFHGERYFIEPLKLP- 144	FHGERYFIE	HLA-DPA1*01:03/DPB1*04:01	66	2.2	2.2
		GERYFIEPL	HLA-DQA1*01:02/DQB1*05:02	194.8	2.7	2.7
		ERYFIEPLK	HLA-DPA1*01:03/DPB1*03:01	121.9	3.9	3.9
		RYFIEPLKL	HLA-DPA1*01:03/DPB1*06:01	19	4.1	4.1
		RYFIEPLKL	HLA-DRB5*01:01	36.1	5.5	5.5
		RYFIEPLKL	HLA-DRB1*07:01	46.8	5.6	5.6
		YFIEPLKLP	HLA-DRB3*01:01	165.9	5.7	5.7
		GERYFIEPL	HLA-DQA1*01:01/DQB1*05:01	43.7	0.52	0.52
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*14:01	179.8	0.93	0.93
61	131- FHGERYFIEPLKLP- 145	FIEPLKLP	HLA-DPA1*02:01/DPB1*01:01	70	0.95	0.95
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*05:01	166.9	1.6	1.6
		RYFIEPLKL	HLA-DPA1*03:01/DPB1*04:02	55.9	2.1	2.1

		YFIEPLKLP	HLA-DPA1*01:03/DPB1*02:01	59.1	2.4	2.4
		RYFIEPLKL	HLA-DPA1*01:03/DPB1*06:01	19.1	4.1	4.1
		ERYFIEPLK	HLA-DPA1*01:03/DPB1*03:01	132.9	4.2	4.2
		RYFIEPLKL	HLA-DRB5*01:01	37.5	5.7	5.7
		RYFIEPLKL	HLA-DRB1*10:01	44	7	7
		FIEPLKLPG	HLA-DRB1*11:01	77.8	7.4	7.4
		RYFIEPLKL	HLA-DRB1*07:01	66.2	7.8	7.8
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*14:01	159.7	0.75	0.75
		GERYFIEPL	HLA-DQA1*01:01/DQB1*05:01	66.1	1.1	1.1
		RYFIEPLKL	HLA-DPA1*03:01/DPB1*04:02	49.1	1.7	1.7
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*05:01	171.9	1.7	1.7
		FIEPLKLPG	HLA-DPA1*02:01/DPB1*01:01	115.5	2.3	2.3
62	132- HGERYFIEPLKLPGS- 146	FIEPLKLPG	HLA-DRB1*11:01	30.1	3.1	3.1
		RYFIEPLKL	HLA-DPA1*01:03/DPB1*06:01	18.1	4	4
		YFIEPLKLP	HLA-DPA1*01:03/DPB1*02:01	95.4	4.1	4.1
		ERYFIEPLK	HLA-DPA1*01:03/DPB1*03:01	129	4.1	4.1
		RYFIEPLKL	HLA-DRB1*10:01	33.6	4.9	4.9
		RYFIEPLKL	HLA-DRB5*01:01	36.9	5.6	5.6
		RYFIEPLKL	HLA-DRB1*07:01	78.5	9	9
		FIEPLKLPG	HLA-DRB1*04:04	118.9	9.5	9.5
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*14:01	160.7	0.75	0.75
		RYFIEPLKL	HLA-DPA1*03:01/DPB1*04:02	47	1.6	1.6
		RYFIEPLKL	HLA-DPA1*02:01/DPB1*05:01	181.6	1.8	1.8
		FIEPLKLPG	HLA-DPA1*02:01/DPB1*01:01	110.2	2.1	2.1
		FIEPLKLPG	HLA-DRB1*11:01	24.8	2.4	2.4
63	133- GERYFIEPLKLPGSE- 147	GERYFIEPL	HLA-DQA1*01:01/DQB1*05:01	128.9	2.4	2.4
		RYFIEPLKL	HLA-DPA1*01:03/DPB1*06:01	17.4	3.8	3.8
		RYFIEPLKL	HLA-DRB1*10:01	31.2	4.5	4.5
		ERYFIEPLK	HLA-DPA1*01:03/DPB1*03:01	140.8	4.5	4.5
		YFIEPLKLP	HLA-DPA1*01:03/DPB1*02:01	106.8	4.8	4.8
		FIEPLKLPG	HLA-DRB1*04:04	85.2	6.8	6.8
		RYFIEPLKL	HLA-DRB5*01:01	48.4	7.1	7.1
64	134- ERYFIEPLKLPGSEA- 148	RYFIEPLKL	HLA-DPA1*02:01/DPB1*14:01	198.9	1.1	1.1
		FIEPLKLPG	HLA-DRB1*11:01	21	2.1	2.1

		RYFIEPLKL	HLA-DPA1*03:01/DPB1*04:02	57.5	2.2	2.2
		FIEPLKLPG	HLA-DPA1*02:01/DPB1*01:01	141.8	3.1	3.1
		RYFIEPLKL	HLA-DPA1*01:03/DPB1*06:01	20.5	4.3	4.3
		RYFIEPLKL	HLA-DRB1*10:01	32.2	4.7	4.7
		YFIEPLKLP	HLA-DPA1*01:03/DPB1*02:01	139.5	6.3	6.3
		FIEPLKLPG	HLA-DRB1*04:04	81	6.4	6.4
		FIEPLKLPG	HLA-DRB1*11:01	20.4	2.1	2.1
		RYFIEPLKL	HLA-DPA1*03:01/DPB1*04:02	111.9	5	5
65	135- RYFIEPLKLPGSEAH- 149	FIEPLKLPG	HLA-DRB1*04:04	76.3	5.9	5.9
		FIEPLKLPG	HLA-DRB1*10:01	43.8	6.9	6.9
		FIEPLKLPG	HLA-DPA1*01:03/DPB1*06:01	50.3	8.8	8.8
66	136- YFIEPLKLPGSEAHA- 150	FIEPLKLPG	HLA-DRB1*11:01	36.6	3.7	3.7
	147- EAHAVYKYENIEKED- 161	VYKYENIEK	HLA-DRB1*04:05	128.7	6.9	6.9
68	148- AHAVYKYENIEKEDE- 162	VYKYENIEK	HLA-DRB1*04:05	95.2	4.9	4.9
69	149- HAVYKYENIEKEDET- 163	YKYENIEKE	HLA-DRB1*04:05	111.8	5.8	5.8
70	166- MCGVIQKWKSDELIK- 180	IQKWKSDEL	HLA-DRB1*15:01	130.2	9.1	9.1
		FRLNLTPQQ	HLA-DRB1*04:05	10.7	0.03	0.03
		FRLNLTPQQ	HLA-DRB3*02:02	3.5	0.05	0.05
		FRLNLTPQQ	HLA-DRB1*08:02	101.8	2.2	2.2
71	181- KPFRLNLTPQQQESP- 195	RLNLTPQQQ	HLA-DRB4*01:01	75.9	4.3	4.3
		FRLNLTPQQ	HLA-DRB1*04:01	99	4.3	4.3
		FRLNLTPQQ	HLA-DRB1*10:01	34.1	5	5
		FRLNLTPQQ	HLA-DRB1*01:01	18.1	6	6
		FRLNLTPQQ	HLA-DRB3*03:01	25.5	7.4	7.4
		FRLNLTPQQ	HLA-DRB1*04:05	21.6	0.32	0.32
		FRLNLTPQQ	HLA-DRB3*02:02	12.8	0.76	0.76
72	182- PFRLNLTPQQQESPQ- 196	FRLNLTPQQ	HLA-DRB1*08:02	167	4.5	4.5
		RLNLTPQQQ	HLA-DRB4*01:01	97.4	5.8	5.8
		FRLNLTPQQ	HLA-DRB1*10:01	42.1	6.5	6.5
		FRLNLTPQQ	HLA-DRB1*04:01	183.1	8	8
73	183- FRLNLTPQQQESPQA- 197	LNLTQQQE	HLA-DRB1*04:05	90.2	4.5	4.5
		FRLNLTPQQ	HLA-DRB3*02:02	129.2	5	5
		NLTQQQES	HLA-DRB4*01:01	148.7	9	9
74	194- SPQAKVYLVIVADKS- 208	VYLVIVADK	HLA-DRB5*01:01	44	6.4	6.4

		YLVIVADKS	HLA-DRB1*01:01	14.8	4.7	4.7
		VYLVIVADK	HLA-DRB5*01:01	33.6	5.1	5.1
75	195- PQAKVYLVIVADKSM- 209	YLVIVADKS	HLA-DRB1*16:02	112.2	5.2	5.2
		YLVIVADKS	HLA-DRB1*04:01	133.9	6	6
		YLVIVADKS	HLA-DRB1*04:05	171.2	9	9
		VIVADKSMV	HLA-DRB1*03:01	39.7	1.5	1.5
		YLVIVADKS	HLA-DRB1*04:01	58.2	2.2	2.2
		YLVIVADKS	HLA-DRB1*16:02	62.4	2.4	2.4
		YLVIVADKS	HLA-DRB1*01:01	9.9	2.6	2.6
		VYLVIVADK	HLA-DRB5*01:01	27.7	4.3	4.3
		YLVIVADKS	HLA-DRB3*01:01	175.5	5.9	5.9
76	196- QAKVYLVIVADKSMV- 210	VIVADKSMV	HLA-DRB3*03:01	22.1	6.3	6.3
		YLVIVADKS	HLA-DRB1*04:05	155.6	8.2	8.2
		VIVADKSMV	HLA- DQA1*01:02/DQB1*05:01	33.8	8.2	8.2
		YLVIVADKS	HLA-DRB1*10:01	55.4	9.2	9.2
		KVYLVIVAD	HLA-DRB1*04:04	120.1	9.6	9.6
		VYLVIVADK	HLA- DPA1*01:03/DPB1*06:01	61	9.7	9.7
		LVIVADKSM	HLA-DRB1*15:01	143.9	9.9	9.9
		IVADKSMVD	HLA-DRB1*03:01	8.6	0.1	0.1
		IVADKSMVD	HLA-DRB3*01:01	24.1	1.1	1.1
		YLVIVADKS	HLA-DRB1*04:01	37.7	1.1	1.1
		YLVIVADKS	HLA-DRB1*16:02	54.6	2	2
		YLVIVADKS	HLA-DRB1*01:01	9.7	2.5	2.5
		VIVADKSMV	HLA-DRB3*03:01	15.5	4.1	4.1
77	197- AKVYLVIVADKSMVD- 211	VYLVIVADK	HLA-DRB5*01:01	32.6	5	5
		IVADKSMVD	HLA-DRB1*04:05	108.9	5.7	5.7
		IVADKSMVD	HLA- DQA1*01:02/DQB1*05:01	25.1	5.7	5.7
		IVADKSMVD	HLA-DRB1*13:02	62.3	7.1	7.1
		YLVIVADKS	HLA-DRB1*10:01	46.9	7.5	7.5
		VIVADKSMV	HLA-DRB1*04:04	95	7.6	7.6
		IVADKSMVD	HLA-DRB1*03:01	4.9	0.01	0.01
		IVADKSMVD	HLA-DRB1*04:01	27.8	0.55	0.55
		IVADKSMVD	HLA-DRB3*01:01	23.6	0.98	0.98
		YLVIVADKS	HLA-DRB1*16:02	53.9	2	2
		YLVIVADKS	HLA-DRB1*01:01	10.5	2.9	2.9
		VIVADKSMV	HLA-DRB3*03:01	14.2	3.6	3.6
78	198- KVYLVIVADKSMVDK- 212	IVADKSMVD	HLA- DQA1*01:02/DQB1*05:01	22.6	4.9	4.9
		IVADKSMVD	HLA-DRB1*04:05	106.3	5.5	5.5
		VYLVIVADK	HLA-DRB5*01:01	39.6	6	6
		IVADKSMVD	HLA-DRB1*13:02	51.9	6.3	6.3
		VIVADKSMV	HLA-DRB1*04:04	80.8	6.4	6.4
		YLVIVADKS	HLA-DRB1*10:01	52.3	8.6	8.6

		LVIVADKSM	HLA-DRB1*15:01	135.2	9.3	9.3
		IVADKSMVD	HLA-DRB1*03:01	4.2	0.01	0.01
		IVADKSMVD	HLA-DRB1*04:01	32.6	0.78	0.78
		IVADKSMVD	HLA-DRB3*01:01	26.7	1.1	1.1
		YLVIVADKS	HLA-DRB1*16:02	67	2.6	2.6
	199-	VIVADKSMV	HLA-DRB3*03:01	16.1	4.3	4.3
79	VYLIVADKSMVDKH- 213	IVADKSMVD	HLA- DQA1*01:02/DQB1*05:01	20.7	4.4	4.4
		YLVIVADKS	HLA-DRB1*01:01	15.7	5	5
		IVADKSMVD	HLA-DRB1*04:05	119.4	6.3	6.3
		IVADKSMVD	HLA-DRB1*13:02	53.4	6.4	6.4
		VIVADKSMV	HLA-DRB1*04:04	95.1	7.6	7.6
		IVADKSMVD	HLA-DRB1*03:01	4.2	0.01	0.01
		IVADKSMVD	HLA-DRB3*01:01	30.9	1.4	1.4
		IVADKSMVD	HLA-DRB1*04:01	44.9	1.4	1.4
		IVADKSMVD	HLA- DQA1*01:02/DQB1*05:01	21.3	4.6	4.6
80	200- YLVIVADKSMVDKHN- 214	IVADKSMVD	HLA-DRB1*16:02	107.9	4.9	4.9
		VIVADKSMV	HLA-DRB3*03:01	18.4	5.1	5.1
		IVADKSMVD	HLA-DRB1*13:02	52.2	6.3	6.3
		IVADKSMVD	HLA-DRB1*04:05	151.5	8	8
		VIVADKSMV	HLA-DRB1*04:04	109.4	8.7	8.7
		IVADKSMVD	HLA-DRB1*03:01	5	0.01	0.01
		IVADKSMVD	HLA-DRB3*01:01	50.8	2.2	2.2
		IVADKSMVD	HLA-DRB1*04:01	85.3	3.5	3.5
81	201- LVIVADKSMVDKHNG- 215	IVADKSMVD	HLA- DQA1*01:02/DQB1*05:01	25.7	5.8	5.8
		VIVADKSMV	HLA-DRB3*03:01	25.2	7.3	7.3
		IVADKSMVD	HLA-DRB1*13:02	91.2	9.4	9.4
		IVADKSMVD	HLA-DRB1*03:01	9.6	0.12	0.12
82	202- VIVADKSMVDKHNGN- 216	IVADKSMVD	HLA-DRB3*01:01	125.9	4.6	4.6
		IVADKSMVD	HLA-DRB1*04:01	167.8	7.2	7.2
83	241- IIMAGIECWTTNDF- 255	IIMAGIEC	HLA- DQA1*01:02/DQB1*05:01	39.8	9.6	9.6
84	244- MAGIECWTTNDFFEV- 258	WTTNDFFEV	HLA- DPA1*01:03/DPB1*04:01	133	4.2	4.2
		WTTNDFFEV	HLA- DPA1*01:03/DPB1*02:01	182.3	8.1	8.1
85	245- AGIECWTTNDFFEVK- 259	WTTNDFFEV	HLA- DPA1*01:03/DPB1*04:01	88.5	2.8	2.8
		WTTNDFFEV	HLA- DPA1*01:03/DPB1*02:01	138.6	6.3	6.3
86	246- GIECWTTNDFFEVKS- 260	WTTNDFFEV	HLA- DPA1*01:03/DPB1*04:01	78.8	2.5	2.5
		WTTNDFFEV	HLA- DPA1*01:03/DPB1*02:01	143.7	6.6	6.6
87	247- IECWTTNDFFEVKSS- 261	WTTNDFFEV	HLA- DPA1*01:03/DPB1*04:01	76.9	2.4	2.4
		WTTNDFFEV	HLA- DPA1*01:03/DPB1*02:01	147.5	6.8	6.8

88	248- ECWTTNDFFEVKSSA- 262	WTTNDFFEV	HLA- DPA1*01:03/DPB1*04:01	113.5	3.6	3.6
		WTTNDFFEV	HLA- DPA1*01:03/DPB1*02:01	175.9	7.9	7.9
89	249- CWTTNDFFEVKSSAK- 263	FFEVKSSAK	HLA-DRB5*01:01	24.9	3.9	3.9
		FFEVKSSAK	HLA-DRB5*01:01	11.4	1.5	1.5
90	250- WTTNDFFEVKSSAKE- 264	FFEVKSSAK	HLA-DRB1*16:02	146.2	7	7
		DFFEVKSSA	HLA- DQA1*05:01/DQB1*04:02	96.7	8	8
		FEVKSSAKE	HLA-DRB1*08:01	157.8	9.9	9.9
		FFEVKSSAK	HLA-DRB5*01:01	8.7	0.85	0.85
91	251- TTNDFFEVKSSAKET- 265	FFEVKSSAK	HLA-DRB1*16:02	104.2	4.7	4.7
		FEVKSSAKE	HLA-DRB1*08:01	109	6.6	6.6
		DFFEVKSSA	HLA- DQA1*05:01/DQB1*04:02	90	7.4	7.4
		FFEVKSSAK	HLA-DRB5*01:01	7.1	0.58	0.58
92	252- TNDFFEVKSSAKETL- 266	FFEVKSSAK	HLA-DRB1*16:02	72.1	2.9	2.9
		FEVKSSAKE	HLA-DRB1*08:01	89	5.3	5.3
		DFFEVKSSA	HLA- DQA1*05:01/DQB1*04:02	103.8	8.5	8.5
		FFEVKSSAK	HLA-DRB5*01:01	8.1	0.77	0.77
93	256- NDFFEVKSSAKETLY- 267	FFEVKSSAK	HLA-DRB1*16:02	70.4	2.8	2.8
		FEVKSSAKE	HLA-DRB1*08:01	84	4.9	4.9
		DFFEVKSSA	HLA- DQA1*05:01/DQB1*04:02	109.8	8.9	8.9
94	254- DFFEVKSSAKETLYS- 268	FFEVKSSAK	HLA-DRB5*01:01	11.2	1.4	1.4
		FFEVKSSAK	HLA-DRB1*16:02	100.1	4.5	4.5
		FEVKSSAKE	HLA-DRB1*08:01	84.4	4.9	4.9
95	255- FFEVKSSAKETLYSF- 269	FFEVKSSAK	HLA-DRB5*01:01	23.8	3.7	3.7
		FEVKSSAKE	HLA-DRB1*08:01	88.8	5.2	5.2
		FEVKSSAKE	HLA-DRB1*16:02	164	7.8	7.8
96	259- KSSAKETLYSFAKWR- 273	ETLYSFAKW	HLA- DPA1*01:03/DPB1*02:01	138.3	6.3	6.3
		TLYSFAKWR	HLA- DQA1*06:01/DQB1*04:02	137.7	1.8	1.8
		KETLYSFAK	HLA- DPA1*02:01/DPB1*05:01	191	1.9	1.9
		ETLYSFAKW	HLA- DPA1*01:03/DPB1*02:01	50.2	2	2
97	260- SSAKETLYSFAKWRV- 274	LYSFAKWRV	HLA-DRB1*08:01	84.5	4.9	4.9
		LYSFAKWRV	HLA-DRB1*15:01	93.5	6.7	6.7
		LYSFAKWRV	HLA-DRB1*13:01	28.3	9.4	9.4
		TLYSFAKWR	HLA-DRB5*01:01	68	9.4	9.4
		YSFAKWRVE	HLA- DQA1*06:01/DQB1*04:02	65.5	0.54	0.54
98	261- SAKETLYSFAKWRVE- 275	YSFAKWRVE	HLA- DPA1*01:03/DPB1*02:01	35.4	1.2	1.2
		KETLYSFAK	HLA- DPA1*02:01/DPB1*05:01	169	1.6	1.6



		LYSFAKWRV	HLA-DRB1*08:01	56.8	2.8	2.8
		YSFAKWRVE	HLA-DPA1*01:03/DPB1*04:01	124.3	3.9	3.9
		YSFAKWRVE	HLA-DQA1*02:01/DQB1*04:02	178.3	5.6	5.6
		LYSFAKWRV	HLA-DRB1*15:01	76.7	5.7	5.7
		LYSFAKWRV	HLA-DRB1*13:01	22.4	7.9	7.9
		TLYSFAKWR	HLA-DRB5*01:01	61.3	8.6	8.6
		LYSFAKWRV	HLA-DRB4*01:03	28.3	9.1	9.1
		YSFAKWRVE	HLA-DQA1*06:01/DQB1*04:02	62.3	0.52	0.52
		YSFAKWRVE	HLA-DPA1*01:03/DPB1*02:01	37.6	1.2	1.2
		KETLYSFAK	HLA-DPA1*02:01/DPB1*05:01	196.1	1.9	1.9
		LYSFAKWRV	HLA-DRB1*08:01	47.8	2	2
99	262- AKETLYSFAKWRVED- 276	YSFAKWRVE	HLA-DQA1*02:01/DQB1*04:02	119.8	3.6	3.6
		YSFAKWRVE	HLA-DPA1*01:03/DPB1*04:01	134.9	4.3	4.3
		LYSFAKWRV	HLA-DRB1*15:01	88.9	6.4	6.4
		LYSFAKWRV	HLA-DRB1*13:01	22.3	7.9	7.9
		LYSFAKWRV	HLA-DRB4*01:03	26.4	8.6	8.6
		TLYSFAKWR	HLA-DRB5*01:01	73.1	9.8	9.8
		YSFAKWRVE	HLA-DQA1*06:01/DQB1*04:02	58.7	0.5	0.5
		YSFAKWRVE	HLA-DPA1*01:03/DPB1*02:01	28.6	0.74	0.74
		LYSFAKWRV	HLA-DRB1*08:01	41.3	1.6	1.6
		YSFAKWRVE	HLA-DQA1*02:01/DQB1*04:02	77.2	2.3	2.3
		SFAKWRVED	HLA-DQA1*01:01/DQB1*05:01	135.6	2.6	2.6
100	263- KETLYSFAKWRVEDL- 277	YSFAKWRVE	HLA-DPA1*01:03/DPB1*04:01	112.1	3.6	3.6
		LYSFAKWRV	HLA-DPA1*02:01/DPB1*01:01	169.7	4.2	4.2
		LYSFAKWRV	HLA-DRB1*15:01	97.5	7	7
		LYSFAKWRV	HLA-DRB4*01:03	22	7.2	7.2
		LYSFAKWRV	HLA-DRB1*13:01	20.7	7.6	7.6
		LYSFAKWRV	HLA-DRB1*16:02	165.8	7.9	7.9
		SFAKWRVED	HLA-DPA1*01:03/DPB1*06:01	45.3	8.2	8.2
		YSFAKWRVE	HLA-DQA1*06:01/DQB1*04:02	56.8	0.49	0.49
		YSFAKWRVE	HLA-DPA1*01:03/DPB1*02:01	37.6	1.2	1.2
		LYSFAKWRV	HLA-DRB1*08:01	42	1.6	1.6
101	264- ETLYSFAKWRVEDLS- 278	YSFAKWRVE	HLA-DQA1*02:01/DQB1*04:02	54.3	1.6	1.6
		SFAKWRVED	HLA-DQA1*01:01/DQB1*05:01	92.4	1.7	1.7
		YSFAKWRVE	HLA-DPA1*01:03/DPB1*04:01	136	4.3	4.3

		LYSFAKWRV	HLA-DRB4*01:03	22.8	7.4	7.4
		LYSFAKWRV	HLA-DRB1*13:01	21.5	7.7	7.7
		SFAKWRVED	HLA-DPA1*01:03/DPB1*06:01	42.9	7.8	7.8
		YSFAKWRVE	HLA-DQA1*05:01/DQB1*04:02	102.3	8.3	8.3
		SFAKWRVED	HLA-DPA1*03:01/DPB1*04:02	195.1	9.2	9.2
		YSFAKWRVE	HLA-DQA1*06:01/DQB1*04:02	78.6	0.69	0.69
		YSFAKWRVE	HLA-DQA1*02:01/DQB1*04:02	55	1.6	1.6
		LYSFAKWRV	HLA-DRB1*08:01	48.5	2.1	2.1
		YSFAKWRVE	HLA-DPA1*01:03/DPB1*02:01	53.6	2.1	2.1
102	265- TLYSFAKWRVEDLSK- 279	SFAKWRVED	HLA-DQA1*01:01/DQB1*05:01	111.6	2.1	2.1
		LYSFAKWRV	HLA-DRB4*01:03	22.3	7.3	7.3
		SFAKWRVED	HLA-DPA1*01:03/DPB1*06:01	40.6	7.5	7.5
		AKWRVEDLS	HLA-DQA1*05:01/DQB1*04:02	108.6	8.8	8.8
		LYSFAKWRV	HLA-DRB1*13:01	30.2	9.8	9.8
		AKWRVEDLS	HLA-DQA1*02:01/DQB1*04:02	69.8	2.2	2.2
		SFAKWRVED	HLA-DQA1*01:01/DQB1*05:01	147.8	2.8	2.8
		YSFAKWRVE	HLA-DRB1*08:01	71	3.9	3.9
103	266- LYSFAKWRVEDLSKR- 280	FAKWRVEDL	HLA-DPA1*01:03/DPB1*02:01	143.9	6.6	6.6
		SFAKWRVED	HLA-DPA1*01:03/DPB1*06:01	51.6	8.9	8.9
		LYSFAKWRV	HLA-DRB4*01:03	27.7	9	9
		SFAKWRVED	HLA-DPA1*03:01/DPB1*04:02	188.7	9	9
		LYSFAKWRV	HLA-DRB1*13:01	28.5	9.5	9.5
104	267- YSFAKWRVEDLSKRK- 281	AKWRVEDLS	HLA-DQA1*02:01/DQB1*04:02	108.6	3.2	3.2
		WRVEDLSKR	HLA-DRB5*01:01	44	6.4	6.4
105	268- SFAKWRVEDLSKRKP- 282	WRVEDLSKR	HLA-DRB5*01:01	45.8	6.7	6.7
106	269- FAKWRVEDLSKRKPH- 283	WRVEDLSKR	HLA-DRB5*01:01	48.2	7	7
107	270- AKWRVEDLSKRKPHN- 284	WRVEDLSKR	HLA-DRB5*01:01	72.9	9.8	9.8
108	307- ICNEKYCAGVVQDHT- 321	YCAGVVQDH	HLA-DQA1*05:01/DQB1*03:01	87.3	5.4	5.4
109	308- CNEKYCAGVVQDHTK- 322	YCAGVVQDH	HLA-DQA1*05:01/DQB1*03:01	89	5.5	5.5
110	309- NEKYCAGVVQDHTKV- 323	YCAGVVQDH	HLA-DQA1*05:01/DQB1*03:01	102.8	6.5	6.5

111	312- YCAGVVQDHTKVPLL- 326	VVQDHTKVP	HLA-DRB3*03:01	33	9.6	9.6
112	314- AGVVQDHTKVPLLMA- 328	DHTKVPLLM	HLA- DPA1*03:01/DPB1*04:02	192.4	9.1	9.1
113	315- GVVQDHTKVPLLMAI- 329	DHTKVPLLM	HLA- DPA1*03:01/DPB1*04:02	105.4	4.7	4.7
114	316- VVQDHTKVPLLMAIT- 330	DHTKVPLLM	HLA- DPA1*03:01/DPB1*04:02	95.1	4.2	4.2
115	317- VQDHTKVPLLMAITM- 331	DHTKVPLLM	HLA- DPA1*03:01/DPB1*04:02	95.6	4.2	4.2
116	318- QDHTKVPLLMAITMG- 332	DHTKVPLLM	HLA- DPA1*03:01/DPB1*04:02	117.3	5.4	5.4
		VPLLMAITM	HLA- DQA1*01:02/DQB1*05:01	39.9	9.7	9.7
		PLLMAITMG	HLA- DQA1*05:01/DQB1*03:03	196.7	9.9	9.9
117	319- DHTKVPLLMAITMGH- 333	PLLMAITMG	HLA- DQA1*01:02/DQB1*05:01	28	6.6	6.6
		PLLMAITMG	HLA- DQA1*05:01/DQB1*03:03	195.8	9.8	9.8
		PLLMAITMG	HLA-DRB1*04:04	45.7	3.1	3.1
118	320- HTKVPLLMAITMGHE- 334	PLLMAITMG	HLA-DRB1*04:04	25	1.3	1.3
		LLMAITMGH	HLA- DQA1*01:02/DQB1*05:01	22.4	4.9	4.9
		MAITMGHEI	HLA-DRB1*07:01	6.5	0.35	0.35
		PLLMAITMG	HLA-DRB1*04:04	19.3	0.67	0.67
		MAITMGHEI	HLA-DRB1*09:01	39.7	3.2	3.2
119	321- TKVPLLMAITMGHEI- 335	LLMAITMGH	HLA- DQA1*01:02/DQB1*05:01	21.3	4.6	4.6
		LLMAITMGH	HLA-DRB4*01:01	121.8	7.4	7.4
		LLMAITMGH	HLA-DRB1*04:01	175.6	7.6	7.6
		LMAITMGHE	HLA-DRB1*08:01	125.8	7.7	7.7
		MAITMGHEI	HLA-DRB1*07:01	8.4	0.54	0.54
		PLLMAITMG	HLA-DRB1*04:04	19.2	0.66	0.66
		MAITMGHEI	HLA-DRB1*09:01	27.5	2	2
		LMAITMGHE	HLA- DQA1*01:02/DQB1*05:01	20.2	4.3	4.3
120	322- KVPLLMAITMGHEIG- 336	LLMAITMGH	HLA-DRB4*01:01	97.2	5.7	5.7
		LLMAITMGH	HLA-DRB1*04:01	161.4	6.9	6.9
		LMAITMGHE	HLA-DRB1*08:01	117.1	7.1	7.1
		MAITMGHEI	HLA-DRB1*07:01	9.8	0.71	0.71
		PLLMAITMG	HLA-DRB1*04:04	24.2	1.2	1.2
		MAITMGHEI	HLA-DRB1*09:01	28.2	2	2
		LMAITMGHE	HLA- DQA1*01:02/DQB1*05:01	21.2	4.6	4.6
		LLMAITMGH	HLA-DRB4*01:01	110.5	6.6	6.6
121	323- VPLLMAITMGHEIGH- 337	LMAITMGHE	HLA-DRB1*08:01	112.7	6.8	6.8
		LLMAITMGH	HLA-DRB1*04:01	197.7	8.6	8.6
		LLMAITMGH	HLA-DRB1*04:01	197.7	8.6	8.6

		MAITMGHEI	HLA-DRB1*07:01	11.4	0.9	0.9
		LMAITMGHE	HLA-DRB1*04:04	29	1.7	1.7
122	324- PLLMAITMGHEIGHN- 338	MAITMGHEI	HLA-DRB1*09:01	31.2	2.3	2.3
		LMAITMGHE	HLA-DRB1*08:01	106.5	6.4	6.4
		LMAITMGHE	HLA- DQA1*01:02/DQB1*05:01	28.7	6.8	6.8
		MAITMGHEI	HLA-DRB1*07:01	11.2	0.88	0.88
123	325- LLMAITMGHEIGHNL- 339	MAITMGHEI	HLA-DRB1*09:01	39.5	3.2	3.2
		LMAITMGHE	HLA-DRB1*04:04	76.5	5.9	5.9
		LMAITMGHE	HLA-DRB1*08:01	118.7	7.2	7.2
124	326- LMAITMGHEIGHNLG- 340	MAITMGHEI	HLA-DRB1*07:01	15	1.5	1.5
		MAITMGHEI	HLA-DRB1*09:01	48.8	4.4	4.4
125	327- MAITMGHEIGHNLGM- 341	MAITMGHEI	HLA-DRB1*07:01	28.7	3.4	3.4
		MAITMGHEI	HLA-DRB1*09:01	95.4	9.6	9.6
126	346- ANCKCKACVMAPEVN- 360	CKACVMAPE	HLA- DQA1*05:01/DQB1*03:02	167.2	2.7	2.7
127	370- CSRNYQKFLKDRKP- 384	YQKFLKDRK	HLA-DRB1*11:01	103.8	9.2	9.2
128	371- SRNYQKFLKDRKPE- 385	YQKFLKDRK	HLA-DRB1*11:01	92.8	8.4	8.4
		NYQKFLKD	HLA-DRB1*08:01	142.8	8.9	8.9
129	372- RNYQKFLKDRKPEC- 386	NYQKFLKD	HLA-DRB1*08:01	133	8.2	8.2
		YQKFLKDRK	HLA-DRB1*16:02	169.8	8.2	8.2
		YQKFLKDRK	HLA-DRB1*11:01	93.2	8.4	8.4
130	373- NYYQKFLKDRKPECL- 387	FLKDRKPEC	HLA-DRB3*01:01	192.9	6.3	6.3
		FLKDRKPEC	HLA-DRB1*16:02	154.6	7.4	7.4
		YQKFLKDRK	HLA-DRB1*11:01	106.7	9.4	9.4
131	374- YYQKFLKDRKPECLF- 388	FLKDRKPEC	HLA-DRB3*01:01	128.4	4.7	4.7
		FLKDRKPEC	HLA-DRB1*16:02	164.5	7.8	7.8
132	375- YQKFLKDRKPECLFK- 389	FLKDRKPEC	HLA-DRB3*01:01	148	5.2	5.2
133	376- QKFLKDRKPECLFKK- 390	FLKDRKPEC	HLA-DRB3*01:01	198.4	6.4	6.4
134	381- DRKPECLFKKPLRTD- 395	CLFKKPLRT	HLA-DRB1*08:01	73.1	4.1	4.1
135	382- RKPECLFKKPLRTDT- 396	CLFKKPLRT	HLA-DRB1*08:01	60.9	3.1	3.1
136	383- KPECLFKKPLRTDTV- 397	CLFKKPLRT	HLA-DRB1*08:01	56.2	2.8	2.8
137	384- PECLFKKPLRTDTVS- 398	CLFKKPLRT	HLA-DRB1*08:01	56.6	2.8	2.8
138	385- ECLFKKPLRTDTVST- 399	CLFKKPLRT	HLA-DRB1*08:01	65	3.5	3.5

139	386- CLFKKPLRTDTVSTP- 400	LRTDTVSTP	HLA-DRB3*03:01	26.1	7.6	7.6
140	387- LFKKPLRTDTVSTPV- 401	LRTDTVSTP LRTDTVSTP	HLA-DRB3*03:01 HLA-DRB1*03:01	17.3 145	4.7 5.9	4.7 5.9
141	388- FKKPLRTDTVSTPVS- 402	LRTDTVSTP LRTDTVSTP TDTVSTPVS	HLA-DRB3*03:01 HLA-DRB1*04:01 HLA- DQA1*02:01/DQB1*03:03	16.8 155.4 155.9	4.6 6.7 9.7	4.6 6.7 9.7
142	389- KKPLRTDTVSTPVSG- 403	LRTDTVSTP LRTDTVSTP DTVSTPVSG	HLA-DRB3*03:01 HLA-DRB1*04:01 HLA- DQA1*01:02/DQB1*05:01	17.7 146 39	4.9 6.4 9.5	4.9 6.4 9.5
143	390- KPLRTDTVSTPVSGN- 404	LRTDTVSTP DTVSTPVSG LRTDTVSTP	HLA- DQA1*02:01/DQB1*03:03 HLA-DRB3*03:01 HLA-DRB1*03:01	54.3 22.1 187.7	3.1 6.3 7.1	3.1 6.3 7.1
144	391- PLRTDTVSTPVSGNE- 405	LRTDTVSTP DTVSTPVSG	HLA- DQA1*05:01/DQB1*03:03 HLA-DRB1*04:01	153.6 190.4	7.2 8.3	7.2 8.3
145	392- LRTDTVSTPVSGNEP- 406	LRTDTVSTP DTVSTPVSG	HLA- DQA1*01:02/DQB1*05:01 HLA- DQA1*02:01/DQB1*03:03	37.7 59	9.1 3.4	9.1 3.4
146	393- RTDTVSTPVSGNEPL- 407	DTVSTPVSG DTVSTPVSG	HLA- DQA1*02:01/DQB1*03:03 HLA- DQA1*05:01/DQB1*03:03	164.7 61	7.8 3.6	7.8 3.6
147	394- TDTVSTPVSGNEPLE- 408	DTVSTPVSG	HLA- DQA1*02:01/DQB1*03:03	173.5	8.4	8.4
148	395- DTVSTPVSGNEPLEV- 409	VSGNEPLEV	HLA- DQA1*05:01/DQB1*03:03	64.9	3.8	3.8
149	396- TVSTPVSGNEPLEVI- 410	VSGNEPLEV	HLA- DQA1*02:01/DQB1*03:03 HLA- DQA1*05:01/DQB1*03:03	194	9.8	9.8
150	397- VSTPVSGNEPLEVIT- 411	VSGNEPLEV	HLA- DQA1*02:01/DQB1*03:03	81.9	5.1	5.1
151	398- STPVSGNEPLEVITM- 412	VSGNEPLEV	HLA-DRB1*13:02	61.6	7.1	7.1
152	399- TPVSGNEPLEVITMD- 413	VSGNEPLEV	HLA-DRB1*13:02	35.7	4.7	4.7

153	400- PVSGNEPLEVITMDD- 414	VSGNEPLEV	HLA-DRB1*13:02	86.8	9.2	9.2
		LEVITMDDF	HLA- DQA1*05:01/DQB1*02:01	99.3	2.4	2.4
154	401- VSGNEPLEVITMDDF- 415	PLEVITMDD	HLA-DRB4*01:01	129.3	7.8	7.8
		PLEVITMDD	HLA- DPA1*01:03/DPB1*06:01	58.9	9.5	9.5
		EVITMDDFY	HLA- DQA1*05:01/DQB1*02:01	45.3	0.62	0.62
155	402- SGNEPLEVITMDDFY- 416	PLEVITMDD	HLA-DRB4*01:01	92.9	5.5	5.5
		PLEVITMDD	HLA- DPA1*01:03/DPB1*06:01	42.3	7.7	7.7
		EVITMDDFY	HLA- DQA1*05:01/DQB1*02:01	41.9	0.57	0.57
156	403- GNEPLEVITMDDFYA- 417	PLEVITMDD	HLA-DRB4*01:01	71.1	4	4
		PLEVITMDD	HLA- DPA1*01:03/DPB1*06:01	29.4	5.8	5.8

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**Supplementary 4.** Epitope 9-mer and similarity epitope 15-mer in some Alleles MHC II

No	Peptide (9 mer)	Peptide (15 mer)	Allele
1	1-MIEVLLVTI-9	1-MIEVLLVTICLAAFP-15	HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
2	3-EVLLVTICL-11	1-MIEVLLVTICLAAFP-15	HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*01:03/DPB1*06:01
		2-IEVLLVTICLAAFPY-16	HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
3	3-EVLLVTICLAAFPYQ-17	1-MIEVLLVTICLAAFP-15	HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
		2-IEVLLVTICLAAFPY-16	HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
4	4-VLLVTICLA-12	4-VLLVTICLAAFPYQG-18	HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
		1-MIEVLLVTICLAAFP-15	HLA-DQA1*02:01/DQB1*03:01
			HLA-DQA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*01:03/DPB1*06:01
5	5-LLVTICLAA-13	4-VLLVTICLAAFPYQG-18	HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
		3-EVLLVTICLAAFPYQ-17	HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*01:03/DPB1*06:01

		HLA-DQA1*02:01/DQB1*03:03
		HLA-DQA1*02:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DQA1*02:01/DQB1*03:01
	5-LLVTICLAAFPYQGS-19	HLA-DRB1*10:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*01:02/DQB1*05:01
	1-MIEVLLVTICLAAFP-15	HLA-DQA1*02:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DQA1*02:01/DQB1*03:01
	2-IEVLLVTICLAAFPY-16	HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:02/DQB1*05:01
	3-EVLLVTICLAAFPYQ-17	HLA-DQA1*02:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*02:01
5		HLA-DQA1*01:02/DQB1*05:01
		HLA-DQA1*02:01/DQB1*03:03
	4-VLLVTICLAAFPYQG-18	HLA-DQA1*02:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DQA1*02:01/DQB1*03:01
	5-LLVTICLAAFPYQGS-19	HLA-DRB1*10:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*10:01
	6-LVTICLAAF-14	HLA-DRB1*04:04
	6-LVTICLAAFPYQGSS-20	HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DQA1*02:01/DQB1*03:01
	2-IEVLLVTICLAAFPY-16	HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*01:03/DPB1*06:01
6		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:02/DQB1*05:01
	3-EVLLVTICLAAFPYQ-17	HLA-DQA1*02:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*02:01
	8-TICLAAFPY-16	HLA-DQA1*01:02/DQB1*05:01
	4-VLLVTICLAAFPYQG-18	



		HLA-DQA1*02:01/DQB1*03:03
		HLA-DQA1*02:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DQA1*02:01/DQB1*03:01
5-LLVTICLAAFPYQGS-19		HLA-DRB1*10:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*10:01
6-LVTICLAAFPYQGSS-20		HLA-DRB1*04:04
		HLA-DQA1*05:01/DQB1*03:02
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DRB1*10:01
		HLA-DQA1*05:01/DQB1*04:02
7-VTICLAAFPYQGSSI-21		HLA-DQA1*02:01/DQB1*03:03
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*10:01
8-TICLAAFPYQGSSII-22		HLA-DQA1*03:01/DQB1*03:01
		HLA-DQA1*05:01/DQB1*03:02
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DRB1*10:01
		HLA-DQA1*05:01/DQB1*04:02
7-VTICLAAFPYQGSSI-21		HLA-DQA1*02:01/DQB1*03:03
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*10:01
8-TICLAAFPYQGSSII-22		HLA-DQA1*03:01/DQB1*03:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*10:01
		HLA-DQA1*03:01/DQB1*03:01
		HLA-DQA1*05:01/DQB1*03:01
		HLA-DRB1*15:01
9-ICLAAFPYQGSSIIL-23		HLA-DRB1*09:01
		HLA-DQA1*05:01/DQB1*03:02
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DQA1*05:01/DQB1*03:01
		HLA-DRB1*04:05
10-CLAAFPYQGSSIILE-24		HLA-DRB1*15:01
		HLA-DQA1*03:01/DQB1*03:02
13-AFPYQGSSI-21	11-LAAFPYQGSSIILES-25	HLA-DQA1*05:01/DQB1*03:02

			HLA-DRB1*04:05
			HLA-DQA1*05:01/DQB1*03:01
			HLA-DQA1*05:01/DQB1*04:02
			HLA-DQA1*01:02/DQB1*06:02
			HLA-DQA1*03:01/DQB1*03:02
			HLA-DQA1*01:02/DQB1*06:02
			HLA-DQA1*05:01/DQB1*03:02
			HLA-DQA1*05:01/DQB1*03:01
	12-AAFPYQGSSIILESG-26		HLA-DRB1*04:05
			HLA-DQA1*01:02/DQB1*06:02
			HLA-DRB1*04:05
	13-AFPYQGSSIILESGN-27		HLA-DQA1*05:01/DQB1*03:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DQA1*05:01/DQB1*04:02
			HLA-DRB1*10:01
	8-TICLAAFPYQGSSII-22		HLA-DQA1*03:01/DQB1*03:01
			HLA-DQA1*05:01/DQB1*04:02
			HLA-DRB1*10:01
			HLA-DQA1*03:01/DQB1*03:01
			HLA-DQA1*05:01/DQB1*03:01
			HLA-DRB1*15:01
	9-ICLAAFPYQGSSIIL-23		HLA-DRB1*09:01
			HLA-DQA1*05:01/DQB1*03:02
			HLA-DQA1*05:01/DQB1*04:02
			HLA-DQA1*05:01/DQB1*03:01
			HLA-DRB1*04:05
	10-CLAAFPYQGSSIILE-24		HLA-DRB1*15:01
8			HLA-DQA1*03:01/DQB1*03:02
			HLA-DQA1*05:01/DQB1*03:02
			HLA-DRB1*04:05
			HLA-DQA1*05:01/DQB1*03:01
			HLA-DQA1*05:01/DQB1*04:02
	11-LAAFPYQGSSIILES-25		HLA-DQA1*01:02/DQB1*06:02
			HLA-DQA1*03:01/DQB1*03:02
			HLA-DQA1*01:02/DQB1*06:02
			HLA-DQA1*05:01/DQB1*03:02
			HLA-DQA1*05:01/DQB1*03:01
	12-AAFPYQGSSIILESG-26		HLA-DRB1*04:05
			HLA-DQA1*01:02/DQB1*06:02
			HLA-DRB1*04:05
	13-AFPYQGSSIILESGN-27		HLA-DQA1*05:01/DQB1*03:01
			HLA-DQA1*01:02/DQB1*06:02
			HLA-DRB1*04:05
	14-FPYQGSSII-22	14-FPYQGSSIILESGNV-28	HLA-DQA1*05:01/DQB1*03:01
			HLA-DQA1*05:01/DQB1*04:02
9	15-PYQGSSIIL-23	9-ICLAAFPYQGSSIIL-23	HLA-DRB1*10:01

		HLA-DQA1*03:01/DQB1*03:01
		HLA-DQA1*05:01/DQB1*03:01
		HLA-DRB1*15:01
		HLA-DRB1*09:01
		HLA-DQA1*05:01/DQB1*03:02
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DQA1*05:01/DQB1*03:01
		HLA-DRB1*04:05
	10-CLAAFPYQGSSIILE-24	HLA-DRB1*15:01
		HLA-DQA1*03:01/DQB1*03:02
		HLA-DQA1*05:01/DQB1*03:02
		HLA-DRB1*04:05
		HLA-DQA1*05:01/DQB1*03:01
		HLA-DQA1*05:01/DQB1*04:02
	11-LAAFPYQGSSIILES-25	HLA-DQA1*01:02/DQB1*06:02
		HLA-DQA1*03:01/DQB1*03:02
		HLA-DQA1*01:02/DQB1*06:02
		HLA-DQA1*05:01/DQB1*03:02
		HLA-DQA1*05:01/DQB1*03:01
	12-AAFPYQGSSIILESG-26	HLA-DRB1*04:05
		HLA-DQA1*01:02/DQB1*06:02
		HLA-DRB1*04:05
	13-AFPYQGSSIILESGN-27	HLA-DQA1*05:01/DQB1*03:01
		HLA-DQA1*01:02/DQB1*06:02
		HLA-DRB1*04:05
	14-FPYQGSSIILESGNV-28	HLA-DQA1*05:01/DQB1*03:01
	15-PYQGSSIILESGNVN-29	HLA-DQA1*01:02/DQB1*06:02
10	23-LESGNVNDY-31	-
		25-SGNVNDYEVVYPRKI-39
		HLA-DRB1*07:01
		HLA-DRB1*07:01
11		26-GNVNDYEVVYPRKIT-40
		HLA-DRB1*09:01
		HLA-DRB1*07:01
	27-NVNDYEVVY-35	HLA-DQA1*05:01/DQB1*04:02
		27-NVNDYEVVYPRKITA-41
		HLA-DRB1*09:01
		25-SGNVNDYEVVYPRKI-39
		HLA-DRB1*07:01
		HLA-DRB1*07:01
		26-GNVNDYEVVYPRKIT-40
		HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
12		27-NVNDYEVVYPRKITA-41
		HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
		28-VNDYEVVYPRKITAL-42
		HLA-DRB1*09:01
		HLA-DRB1*07:01
	29-NDYEVVYPR-37	HLA-DRB1*07:01
		29-NDYEVVYPRKITALS-43
		HLA-DQA1*05:01/DQB1*04:02

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		HLA-DRB1*09:01
		HLA-DRB1*08:01
25-SGNVNDYEVVYPRKI-39		HLA-DRB1*07:01
		HLA-DRB1*07:01
26-GNVNDYEVVYPRKIT-40		HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
27-NVNDYEVVYPRKITA-41		HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
28-VNDYEVVYPRKITAL-42		HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
29-NDYEVVYPRKITALS-43		HLA-DRB1*09:01
		HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DQA1*05:01/DQB1*04:02
30-DYEVVYPRKITALSE-44		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
31-YEVVYPRKI-39	31-YEVVYPRKITALSE-45	HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*09:01
		HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*03:01
33-VVYPRKITA-41	33-VVYPRKITALSEGA-47	HLA-DRB1*08:02

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		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
	28-VNDYEVVYPRKITAL-42	HLA-DRB1*09:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*09:01
	29-NDYEVVYPRKITALS-43	HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DQA1*05:01/DQB1*04:02
15	30-DYEVVYPRKITALSE-44	HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
	31-YEVVYPRKITALSEG-45	HLA-DRB1*08:01
	32-EVVYPRKITALSEGA-46	HLA-DPA1*01:03/DPB1*03:01
		HLA-DPA1*01:03/DPB1*03:01
	33-VVYPRKITALSEGAA-47	HLA-DRB1*08:02
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*08:02
	34-VYPRKITAL-42 34-VYPRKITALSEGAAQ-48	HLA-DQA1*02:01/DQB1*03:01
		HLA-DRB1*07:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*09:01
	29-NDYEVVYPRKITALS-43	HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DQA1*05:01/DQB1*04:02
	30-DYEVVYPRKITALSE-44	HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*07:01
16		HLA-DQA1*05:01/DQB1*04:02
	31-YEVVYPRKITALSEG-45	HLA-DRB1*08:01
	32-EVVYPRKITALSEGA-46	HLA-DPA1*01:03/DPB1*03:01
		HLA-DPA1*01:03/DPB1*03:01
	33-VVYPRKITALSEGAA-47	HLA-DRB1*08:02
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*08:02
	34-VYPRKITALSEGAAQ-48	HLA-DQA1*02:01/DQB1*03:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*08:02
	35-YPRKITALS-43 35-YPRKITALSEGAAQQ-49	HLA-DQA1*02:01/DQB1*03:01
17	43-SEGAAQQKY-51 37-RKITALSEGAAQQKY-51	HLA-DQA1*02:01/DQB1*03:01
	38-KITALSEGAAQQKYE-52	HLA-DQA1*02:01/DQB1*03:01

18	51-YEDTMQYEF-59	39-ITALSEGAAQQKYED-53	HLA-DQA1*02:01/DQB1*03:01
19		72-KNKELFAKDYSETHY-86	HLA-DRB3*01:01
		73-NKELFAKDYSETHYS-87	HLA-DRB3*01:01
	77-FAKDYSETH-85	74-KELFAKDYSETHYSP-88	HLA-DRB3*01:01
		80-DYSETHYSPDGTRIT-94	HLA-DRB3*01:01
20		81-YSETHYSPDGTRITT-95	HLA-DRB3*01:01
		82-SETHYSPDGTRITTY-96	HLA-DRB3*01:01
	83-ETHYSPDGT-91	83-ETHYSPDGTRITTYP-97	HLA-DRB3*01:01
		80-DYSETHYSPDGTRIT-94	HLA-DRB3*01:01
		81-YSETHYSPDGTRITT-95	HLA-DRB3*01:01
21		82-SETHYSPDGTRITTY-96	HLA-DRB3*01:01
		83-ETHYSPDGTRITTYP-97	HLA-DRB3*01:01
		84-THYSPDGTRITTYPS-98	HLA-DRB3*01:01
	86-YSPDGTRIT-94	85-HYSPDGTRITTYPSV-99	HLA-DRB3*01:01
		84-THYSPDGTRITTYPS-98	HLA-DRB3*01:01
		85-HYSPDGTRITTYPSV-99	HLA-DRB3*01:01
			HLA-DQA1*01:03/DQB1*06:03
		87-SPDGTRITTYPSVED-101	HLA-DRB1*04:05
22			HLA-DQA1*01:03/DQB1*06:03
		88-PDGTRITTYPSVEDH-102	HLA-DRB1*04:05
			HLA-DQA1*01:03/DQB1*06:03
		89-DGTRITTYPSVEDHC-103	HLA-DRB1*04:05
			HLA-DQA1*01:03/DQB1*06:03
	90-GTRITTYPS-98	90-GTRITTYPSVEDHCY-104	HLA-DRB1*04:05
		85-HYSPDGTRITTYPSV-99	HLA-DRB3*01:01
			HLA-DQA1*01:03/DQB1*06:03
		87-SPDGTRITTYPSVED-101	HLA-DRB1*04:05
			HLA-DQA1*01:03/DQB1*06:03
23		88-PDGTRITTYPSVEDH-102	HLA-DRB1*04:05
			HLA-DQA1*01:03/DQB1*06:03
		89-DGTRITTYPSVEDHC-103	HLA-DRB1*04:05
			HLA-DQA1*01:03/DQB1*06:03
		90-GTRITTYPSVEDHCY-104	HLA-DRB1*04:05
	91-TRITTYPSV-99	91-TRITTYPSVEDHCYY-105	HLA-DRB1*04:05
			HLA-DQA1*01:03/DQB1*06:03
24	96-YPSVEDHCY-104	90-GTRITTYPSVEDHCY-104	HLA-DRB1*04:05
		91-TRITTYPSVEDHCYY-105	HLA-DRB1*04:05
		123-NGLKGHFKFHGERYF-137	HLA-DQA1*05:01/DQB1*04:02
			HLA-DQA1*05:01/DQB1*04:02
25			HLA-DPA1*01:03/DPB1*04:01
	128-HFKFHGERY-136	124-GLKGHFKFHGERYFI-138	HLA-DPA1*01:03/DPB1*02:01
			HLA-DRB1*15:01

		HLA-DRB1*07:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DPA1*01:03/DPB1*02:01
125-LKGHFKFHGERYFIE-		HLA-DQA1*05:01/DQB1*04:02
139		HLA-DRB1*16:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
126-KGHFKFHGERYFIEP-		HLA-DPA1*01:03/DPB1*02:01
140		HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:01/DQB1*05:01
127-GHFKFHGERYFIEPL-	141	HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:02/DQB1*05:02
128-HFKFHGERYFIEPLK-	142	HLA-DPA1*03:01/DPB1*04:02
123-NGLKGHFKFHGERYF-		
137		HLA-DQA1*05:01/DQB1*04:02
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*01:03/DPB1*02:01
124-GLKGHFKFHGERYFI-		HLA-DRB1*15:01
138		HLA-DRB1*07:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DPA1*01:03/DPB1*02:01
125-LKGHFKFHGERYFIE-		HLA-DQA1*05:01/DQB1*04:02
139		HLA-DRB1*16:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
126-KGHFKFHGERYFIEP-		HLA-DPA1*01:03/DPB1*02:01
140		HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:01/DQB1*05:01
127-GHFKFHGERYFIEPL-	141	HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
129-FKFHGERYF-		
137	128-HFKFHGERYFIEPLK-	142
		HLA-DQA1*01:01/DQB1*05:01

	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:02/DQB1*05:02
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:02/DQB1*05:02
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DRB1*07:01
	HLA-DPA1*01:03/DPB1*03:01
	HLA-DRB5*01:01
129-FKFGHGERYFIEPLKL-143	HLA-DPA1*01:03/DPB1*06:01
	HLA-DQA1*05:01/DQB1*04:02
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*01:03/DPB1*02:01
124-GLKGFHFKFHGERYFI-138	HLA-DRB1*15:01
	HLA-DRB1*07:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*02:01
125-LKGFHFKFHGERYFIE-139	HLA-DQA1*05:01/DQB1*04:02
	HLA-DRB1*16:02
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*02:01/DPB1*01:01
126-KGFHFKFHGERYFIEP-140	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*05:01/DQB1*04:02
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:01/DQB1*05:01
127-GHFKFHGERYFIEPL-141	HLA-DQA1*05:01/DQB1*04:02
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:02/DQB1*05:02
128-HFKFHGERYFIEPLK-142	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:02/DQB1*05:02
130-KFHGERYFI-138	HLA-DPA1*03:01/DPB1*04:02
129-FKFGHGERYFIEPLKL-143	HLA-DPA1*03:01/DPB1*04:02



	HLA-DRB1*07:01
	HLA-DPA1*01:03/DPB1*03:01
	HLA-DRB5*01:01
	HLA-DPA1*01:03/DPB1*06:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*02:01/DPB1*14:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DQA1*01:02/DQB1*05:02
	HLA-DPA1*01:03/DPB1*03:01
	HLA-DPA1*01:03/DPB1*06:01
	HLA-DRB5*01:01
	HLA-DRB1*07:01
130-KFHGERYFIEPLKLP-144	HLA-DRB3*01:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:01/DQB1*05:01
127-GHFKFHGERYFIEPL-141	HLA-DQA1*05:01/DQB1*04:02
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:02/DQB1*05:02
128-HFKFHGERYFIEPLK-142	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:02/DQB1*05:02
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DRB1*07:01
	HLA-DPA1*01:03/DPB1*03:01
	HLA-DRB5*01:01
129-FKFHGERYFIEPLKL-143	HLA-DPA1*01:03/DPB1*06:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*02:01/DPB1*14:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*01:03/DPB1*04:01
133-GERYFIEPL-141	HLA-DQA1*01:02/DQB1*05:02
130-KFHGERYFIEPLKLP-144	HLA-DQA1*01:02/DQB1*05:02

		HLA-DPA1*01:03/DPB1*03:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DRB5*01:01
		HLA-DRB1*07:01
		HLA-DRB3*01:01
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*02:01/DPB1*14:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DPA1*03:01/DPB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB5*01:01
		HLA-DRB1*10:01
		HLA-DRB1*11:01
131-FHGERYFIEPLKLPG-145		HLA-DRB1*07:01
		HLA-DPA1*02:01/DPB1*14:01
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*03:01/DPB1*04:02
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DRB1*11:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DRB1*10:01
		HLA-DRB5*01:01
		HLA-DRB1*07:01
132-HGERYFIEPLKLPGS-146		HLA-DRB1*04:04
		HLA-DPA1*02:01/DPB1*14:01
		HLA-DPA1*03:01/DPB1*04:02
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DRB1*11:01
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DRB1*10:01
		HLA-DPA1*01:03/DPB1*03:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*04:04
133-GERYFIEPLKLPGSE-147		HLA-DRB5*01:01
29 134-ERYFIEPLK-		HLA-DPA1*01:03/DPB1*04:01
142	128-HFKFHGERYFIEPLK-142	HLA-DPA1*02:01/DPB1*01:01

HLA-DQA1\*01:01/DQB1\*05:01  
HLA-DPA1\*01:03/DPB1\*02:01  
HLA-DQA1\*01:02/DQB1\*05:02  
HLA-DPA1\*03:01/DPB1\*04:02  
HLA-DPA1\*02:01/DPB1\*01:01  
HLA-DPA1\*01:03/DPB1\*04:01  
HLA-DQA1\*01:01/DQB1\*05:01  
HLA-DPA1\*01:03/DPB1\*02:01  
HLA-DQA1\*01:02/DQB1\*05:02  
HLA-DPA1\*03:01/DPB1\*04:02  
HLA-DRB1\*07:01  
HLA-DPA1\*01:03/DPB1\*03:01  
HLA-DRB5\*01:01  
129-FKFHGERYFIEPLKL-143 HLA-DPA1\*01:03/DPB1\*06:01  
HLA-DQA1\*01:01/DQB1\*05:01  
HLA-DPA1\*02:01/DPB1\*01:01  
HLA-DPA1\*02:01/DPB1\*14:01  
HLA-DPA1\*01:03/DPB1\*02:01  
HLA-DPA1\*03:01/DPB1\*04:02  
HLA-DPA1\*01:03/DPB1\*04:01  
HLA-DQA1\*01:02/DQB1\*05:02  
HLA-DPA1\*01:03/DPB1\*03:01  
HLA-DPA1\*01:03/DPB1\*06:01  
HLA-DRB5\*01:01  
HLA-DRB1\*07:01  
130-KFHGERYFIEPLKLP-144 HLA-DRB3\*01:01  
HLA-DQA1\*01:01/DQB1\*05:01  
HLA-DPA1\*02:01/DPB1\*14:01  
HLA-DPA1\*02:01/DPB1\*01:01  
HLA-DPA1\*02:01/DPB1\*05:01  
HLA-DPA1\*03:01/DPB1\*04:02  
HLA-DPA1\*01:03/DPB1\*02:01  
HLA-DPA1\*01:03/DPB1\*06:01  
HLA-DPA1\*01:03/DPB1\*03:01  
HLA-DRB5\*01:01  
HLA-DRB1\*10:01  
HLA-DRB1\*11:01  
131-FHGERYFIEPLKLP-145 HLA-DRB1\*07:01  
HLA-DPA1\*02:01/DPB1\*14:01  
HLA-DQA1\*01:01/DQB1\*05:01  
HLA-DPA1\*03:01/DPB1\*04:02  
HLA-DPA1\*02:01/DPB1\*05:01  
HLA-DPA1\*02:01/DPB1\*01:01  
132-HGERYFIEPLKLPGS-146 HLA-DRB1\*11:01

	HLA-DPA1*01:03/DPB1*06:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DPA1*01:03/DPB1*03:01
	HLA-DRB1*10:01
	HLA-DRB5*01:01
	HLA-DRB1*07:01
	HLA-DRB1*04:04
	HLA-DPA1*02:01/DPB1*14:01
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*02:01/DPB1*05:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DRB1*11:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*06:01
	HLA-DRB1*10:01
	HLA-DPA1*01:03/DPB1*03:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DRB1*04:04
133-GERYFIEPLKLP-147	HLA-DRB5*01:01
	HLA-DPA1*02:01/DPB1*14:01
	HLA-DRB1*11:01
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*06:01
	HLA-DRB1*10:01
	HLA-DPA1*01:03/DPB1*02:01
134-ERYFIEPLKLP-148	HLA-DRB1*04:04
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:02/DQB1*05:02
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DRB1*07:01
	HLA-DPA1*01:03/DPB1*03:01
	HLA-DRB5*01:01
129-FKFHGERYFIEPLK-143	HLA-DPA1*01:03/DPB1*06:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DPA1*02:01/DPB1*14:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DPA1*03:01/DPB1*04:02
	HLA-DPA1*01:03/DPB1*04:01
135-RYFIEPLK-143	HLA-DQA1*01:02/DQB1*05:02
130-KFHGERYFIEPLK-144	HLA-DQA1*01:02/DQB1*05:02

HLA-DPA1\*01:03/DPB1\*03:01  
 HLA-DPA1\*01:03/DPB1\*06:01  
 HLA-DRB5\*01:01  
 HLA-DRB1\*07:01  
 HLA-DRB3\*01:01  
 HLA-DQA1\*01:01/DQB1\*05:01  
 HLA-DPA1\*02:01/DPB1\*14:01  
 HLA-DPA1\*02:01/DPB1\*01:01  
 HLA-DPA1\*02:01/DPB1\*05:01  
 HLA-DPA1\*03:01/DPB1\*04:02  
 HLA-DPA1\*01:03/DPB1\*02:01  
 HLA-DPA1\*01:03/DPB1\*06:01  
 HLA-DPA1\*01:03/DPB1\*03:01  
 HLA-DRB5\*01:01  
 HLA-DRB1\*10:01  
 HLA-DRB1\*11:01  
 131-FHGERYFIEPLKLPG-145 HLA-DRB1\*07:01  
 HLA-DPA1\*02:01/DPB1\*14:01  
 HLA-DQA1\*01:01/DQB1\*05:01  
 HLA-DPA1\*03:01/DPB1\*04:02  
 HLA-DPA1\*02:01/DPB1\*05:01  
 HLA-DPA1\*02:01/DPB1\*01:01  
 HLA-DRB1\*11:01  
 HLA-DPA1\*01:03/DPB1\*06:01  
 HLA-DPA1\*01:03/DPB1\*02:01  
 HLA-DPA1\*01:03/DPB1\*03:01  
 HLA-DRB1\*10:01  
 HLA-DRB5\*01:01  
 HLA-DRB1\*07:01  
 132-HGERYFIEPLKLPGS-146 HLA-DRB1\*04:04  
 HLA-DPA1\*02:01/DPB1\*14:01  
 HLA-DPA1\*03:01/DPB1\*04:02  
 HLA-DPA1\*02:01/DPB1\*05:01  
 HLA-DPA1\*02:01/DPB1\*01:01  
 HLA-DRB1\*11:01  
 HLA-DQA1\*01:01/DQB1\*05:01  
 HLA-DPA1\*01:03/DPB1\*06:01  
 HLA-DRB1\*10:01  
 HLA-DPA1\*01:03/DPB1\*03:01  
 HLA-DPA1\*01:03/DPB1\*02:01  
 HLA-DRB1\*04:04  
 133-GERYFIEPLKLPGSE-147 HLA-DRB5\*01:01  
 HLA-DPA1\*02:01/DPB1\*14:01  
 134-ERYFIEPLKLPGSEA-148 HLA-DRB1\*11:01

			HLA-DPA1*03:01/DPB1*04:02
			HLA-DPA1*02:01/DPB1*01:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DRB1*10:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DRB1*04:04
			HLA-DRB1*11:01
			HLA-DPA1*03:01/DPB1*04:02
			HLA-DRB1*04:04
			HLA-DRB1*10:01
		135-RYFIEPLKLPGSEAH-149	HLA-DPA1*01:03/DPB1*06:01
31	145-GSEAHAVYK-153	—	
32	146-SEAHAVYKY-154	—	
		147-EAHAVYKYENIEKED-161	HLA-DRB1*04:05
33		148-AHAVYKYENIEKEDE-162	HLA-DRB1*04:05
	149-HAVYKYENI-157	149-HAVYKYENIEKED-163	HLA-DRB1*04:05
		147-EAHAVYKYENIEKED-161	HLA-DRB1*04:05
34		148-AHAVYKYENIEKEDE-162	HLA-DRB1*04:05
	151-VYKYENIEK-159	149-HAVYKYENIEKED-163	HLA-DRB1*04:05
		147-EAHAVYKYENIEKED-161	HLA-DRB1*04:05
		148-AHAVYKYENIEKEDE-162	HLA-DRB1*04:05
35		149-HAVYKYENIEKED-163	HLA-DRB1*04:05
	152-YKYENIEKE-160	149-HAVYKYENIEKED-163	HLA-DRB1*04:05
36	162-ETPKMCGVI-170	—	
37	165-KMCGVIQKW-173	—	
38	172-KWKSDELIC-180	166-MCGVIQKWKSDELIC-180	HLA-DRB1*15:01
39	192-QESPQAKVY-200	—	
40	193-ESPQAKVYL-201	—	
41	201-LVIVADKSM-209	—	
42	209-MVDKHNGNI-217	—	
43	227-MVNTMNECY-235	—	
44	230-TMNECYRPM-238	—	
45	242-IIMAGIECW-250	241-IIIMAGIECWTTNDF-255	HLA-DQA1*01:02/DQB1*05:01
46	247-IECWTTNDF-255	241-IIIMAGIECWTTNDF-255	HLA-DQA1*01:02/DQB1*05:01 HLA-DPA1*01:03/DPB1*04:01

	244-MAGIECWTTNDFFEV- 258		HLA-DPA1*01:03/DPB1*02:01
	245-AGIECWTTNDFFEVK- 259		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	246-GIECWTTNDFFEVKS- 260		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	247-IECWTTNDFFEVKSS- 261		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	244-MAGIECWTTNDFFEV- 258		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	245-AGIECWTTNDFFEVK- 259		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	246-GIECWTTNDFFEVKS- 260		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	247-IECWTTNDFFEVKSS- 261		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
47	248-ECWTTNDFFEVKSSA- 262		HLA-DPA1*01:03/DPB1*04:01
	249-CWTTNDFFEVKSSAK- 263		HLA-DPA1*01:03/DPB1*02:01  HLA-DRB5*01:01 HLA-DRB5*01:01 HLA-DRB1*16:02
	250-WTTNDFFEV- 258	250-WTTNDFFEVKSSAKE- 264	HLA-DQA1*05:01/DQB1*04:02 HLA-DRB1*08:01
	245-AGIECWTTNDFFEVK- 259		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	246-GIECWTTNDFFEVKS- 260		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	247-IECWTTNDFFEVKSS- 261		HLA-DPA1*01:03/DPB1*04:01 HLA-DPA1*01:03/DPB1*02:01
	248-ECWTTNDFFEVKSSA- 262		HLA-DPA1*01:03/DPB1*04:01
48	249-CWTTNDFFEVKSSAK- 263		HLA-DPA1*01:03/DPB1*02:01  HLA-DRB5*01:01 HLA-DRB5*01:01 HLA-DRB1*16:02
		250-WTTNDFFEVKSSAKE- 264	HLA-DQA1*05:01/DQB1*04:02 HLA-DRB1*08:01 HLA-DRB5*01:01 HLA-DRB1*16:02
	251-TTNDFFEVK- 259	251-TTNDFFEVKSSAKET- 265	HLA-DRB1*08:01 HLA-DQA1*05:01/DQB1*04:02 HLA-DRB5*01:01 HLA-DRB1*16:02
49	259-KSSAKETLY- 267	256-NDFFEVKSSAKETLY- 267	HLA-DRB1*08:01 HLA-DQA1*05:01/DQB1*04:02

			HLA-DRB5*01:01
		254-DFFEVKSSAKETLYS-	HLA-DRB1*16:02
		268	HLA-DRB1*08:01
			HLA-DRB5*01:01
			HLA-DRB1*08:01
		255-FFEVKSSAKETLYSF-269	HLA-DRB1*16:02
		259-KSSAKETLYSFAKWR-	
		273	HLA-DPA1*01:03/DPB1*02:01
			HLA-DRB5*01:01
50	261-SAKETLYSF-		HLA-DRB1*08:01
	269	255-FFEVKSSAKETLYSF-269	HLA-DRB1*16:02
		259-KSSAKETLYSFAKWR-	
		273	HLA-DPA1*01:03/DPB1*02:01
			HLA-DQA1*06:01/DQB1*04:02
			HLA-DPA1*02:01/DPB1*05:01
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DRB1*08:01
			HLA-DRB1*15:01
		260-SSAKETLYSFAKWRV-	HLA-DRB1*13:01
		274	HLA-DRB5*01:01
			HLA-DQA1*06:01/DQB1*04:02
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*02:01/DPB1*05:01
			HLA-DRB1*08:01
			HLA-DPA1*01:03/DPB1*04:01
			HLA-DQA1*02:01/DQB1*04:02
			HLA-DRB1*15:01
			HLA-DRB1*13:01
51		261-SAKETLYSFAKWRVE-	HLA-DRB5*01:01
		275	HLA-DRB4*01:03
			HLA-DQA1*06:01/DQB1*04:02
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*02:01/DPB1*05:01
			HLA-DRB1*08:01
			HLA-DQA1*02:01/DQB1*04:02
			HLA-DPA1*01:03/DPB1*04:01
			HLA-DRB1*15:01
			HLA-DRB1*13:01
		262-AKETLYSFAKWRVED-	HLA-DRB4*01:03
		276	HLA-DRB5*01:01
			HLA-DQA1*06:01/DQB1*04:02
			HLA-DPA1*01:03/DPB1*02:01
			HLA-DRB1*08:01
	264-ETLYSFAKW-	263-KETLYSFAKWRVEDL-	HLA-DQA1*02:01/DQB1*04:02
	272	277	HLA-DQA1*01:01/DQB1*05:01



		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DRB1*15:01
		HLA-DRB4*01:03
		HLA-DRB1*13:01
		HLA-DRB1*16:02
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*08:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DRB4*01:03
		HLA-DRB1*13:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*03:01/DPB1*04:02
264-ETLYSFAKWRVEDLS- 278		HLA-DPA1*01:03/DPB1*02:01
259-KSSAKETLYSFAKWR- 273		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*08:01
		HLA-DRB1*15:01
		HLA-DRB1*13:01
260-SSAKETLYSFAKWRV- 274		HLA-DRB5*01:01
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DRB1*15:01
		HLA-DRB1*13:01
		HLA-DRB5*01:01
261-SAKETLYSFAKWRVE- 275		HLA-DRB4*01:03
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DRB1*08:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DRB1*15:01
265-TLYSFAKWR- 273	262-AKETLYSFAKWRVED- 276	HLA-DRB1*13:01

		HLA-DRB4*01:03
		HLA-DRB5*01:01
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*08:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DRB1*15:01
		HLA-DRB4*01:03
		HLA-DRB1*13:01
		HLA-DRB1*16:02
263-KETLYSFAKWRVEDL- 277		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*08:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DRB4*01:03
		HLA-DRB1*13:01
		HLA-DPA1*01:03/DPB1*06:01
264-ETLYSFAKWRVEDLS- 278		HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*03:01/DPB1*04:02
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DRB4*01:03
		HLA-DPA1*01:03/DPB1*06:01
265-TLYSFAKWRVEDLSK- 279		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*13:01
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*08:01
		HLA-DRB1*15:01
		HLA-DRB1*13:01
266-LYSFAKWRV- 274	260-SSAKETLYSFAKWRV- 274	HLA-DRB5*01:01
		HLA-DQA1*06:01/DQB1*04:02
266-LYSFAKWRV- 274	261-SAKETLYSFAKWRVE- 275	HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*02:01/DPB1*05:01

HLA-DRB1\*08:01  
HLA-DPA1\*01:03/DPB1\*04:01  
HLA-DQA1\*02:01/DQB1\*04:02  
HLA-DRB1\*15:01  
HLA-DRB1\*13:01  
HLA-DRB5\*01:01  
HLA-DRB4\*01:03  
HLA-DQA1\*06:01/DQB1\*04:02  
HLA-DPA1\*01:03/DPB1\*02:01  
HLA-DPA1\*02:01/DPB1\*05:01  
HLA-DRB1\*08:01  
HLA-DQA1\*02:01/DQB1\*04:02  
HLA-DPA1\*01:03/DPB1\*04:01  
HLA-DRB1\*15:01  
HLA-DRB1\*13:01  
HLA-DRB4\*01:03  
HLA-DRB5\*01:01  
HLA-DQA1\*06:01/DQB1\*04:02  
HLA-DPA1\*01:03/DPB1\*02:01  
HLA-DRB1\*08:01  
HLA-DQA1\*02:01/DQB1\*04:02  
HLA-DQA1\*01:01/DQB1\*05:01  
HLA-DPA1\*01:03/DPB1\*04:01  
HLA-DPA1\*02:01/DPB1\*01:01  
HLA-DRB1\*15:01  
HLA-DRB4\*01:03  
HLA-DRB1\*13:01  
HLA-DRB1\*16:02  
HLA-DPA1\*01:03/DPB1\*06:01  
HLA-DQA1\*06:01/DQB1\*04:02  
HLA-DPA1\*01:03/DPB1\*02:01  
HLA-DRB1\*08:01  
HLA-DQA1\*02:01/DQB1\*04:02  
HLA-DQA1\*01:01/DQB1\*05:01  
HLA-DPA1\*01:03/DPB1\*04:01  
HLA-DRB4\*01:03  
HLA-DRB1\*13:01  
HLA-DPA1\*01:03/DPB1\*06:01  
HLA-DQA1\*05:01/DQB1\*04:02  
HLA-DPA1\*03:01/DPB1\*04:02  
HLA-DQA1\*06:01/DQB1\*04:02  
HLA-DQA1\*02:01/DQB1\*04:02  
HLA-DRB1\*08:01  
HLA-DPA1\*01:03/DPB1\*02:01

262-AKETLYSFAKWRVED-  
276

263-KETLYSFAKWRVEDL-  
277

264-ETLYSFAKWRVEDLS-  
278

265-TLYSFAKWRVEDLSK-  
279

		HLA-DQA1*01:01/DQB1*05:01
		HLA-DRB4*01:03
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DRB1*13:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DRB4*01:03
266-LYSFAKWRVEDLSKR-		HLA-DPA1*03:01/DPB1*04:02
280		HLA-DRB1*13:01
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DRB1*15:01
		HLA-DRB1*13:01
261-SAKETLYSFAKWRVE-		HLA-DRB5*01:01
275		HLA-DRB4*01:03
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*02:01/DPB1*05:01
		HLA-DRB1*08:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DRB1*15:01
		HLA-DRB1*13:01
262-AKETLYSFAKWRVED-		HLA-DRB4*01:03
276		HLA-DRB5*01:01
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*08:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DPA1*01:03/DPB1*04:01
		HLA-DPA1*02:01/DPB1*01:01
		HLA-DRB1*15:01
		HLA-DRB4*01:03
267-YSFARKWRVE-	263-KETLYSFAKWRVEDL-	HLA-DRB1*13:01
275	277	HLA-DRB1*16:02

	HLA-DPA1*01:03/DPB1*06:01
	HLA-DQA1*06:01/DQB1*04:02
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DRB1*08:01
	HLA-DQA1*02:01/DQB1*04:02
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DRB4*01:03
	HLA-DRB1*13:01
	HLA-DPA1*01:03/DPB1*06:01
264-ETLYSFAKWRVEDLS-	HLA-DQA1*05:01/DQB1*04:02
278	HLA-DPA1*03:01/DPB1*04:02
	HLA-DQA1*06:01/DQB1*04:02
	HLA-DQA1*02:01/DQB1*04:02
	HLA-DRB1*08:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DRB4*01:03
	HLA-DPA1*01:03/DPB1*06:01
265-TLYSFAKWRVEDLSK-	HLA-DQA1*05:01/DQB1*04:02
279	HLA-DRB1*13:01
	HLA-DQA1*02:01/DQB1*04:02
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DRB1*08:01
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DPA1*01:03/DPB1*06:01
	HLA-DRB4*01:03
	HLA-DPA1*03:01/DPB1*04:02
266-LYSFAKWRVEDLSKR-	HLA-DRB1*13:01
280	HLA-DQA1*02:01/DQB1*04:02
267-YSFSAKWRVEDLSKRK-	HLA-DRB5*01:01
281	HLA-DQA1*06:01/DQB1*04:02
	HLA-DPA1*01:03/DPB1*02:01
	HLA-DRB1*08:01
	HLA-DQA1*02:01/DQB1*04:02
	HLA-DQA1*01:01/DQB1*05:01
	HLA-DPA1*01:03/DPB1*04:01
	HLA-DPA1*02:01/DPB1*01:01
	HLA-DRB1*15:01
	HLA-DRB4*01:03
	HLA-DRB1*13:01
	HLA-DRB1*16:02
263-KETLYSFAKWRVEDL-	HLA-DPA1*01:03/DPB1*06:01
277	HLA-DQA1*06:01/DQB1*04:02
269-FAKWRVEDL-	
277	

		HLA-DPA1*01:03/DPB1*02:01
		HLA-DRB1*08:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
264-ETLYSFAKWRVEDLS-		HLA-DPA1*01:03/DPB1*04:01
278		HLA-DRB4*01:03
		HLA-DRB1*13:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*05:01/DQB1*04:02
		HLA-DPA1*03:01/DPB1*04:02
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DRB4*01:03
		HLA-DPA1*01:03/DPB1*06:01
265-TLYSFAKWRVEDLSK-		HLA-DQA1*05:01/DQB1*04:02
279		HLA-DRB1*13:01
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DRB4*01:03
		HLA-DPA1*03:01/DPB1*04:02
266-LYSFAKWRVEDLSKR-		HLA-DRB1*13:01
280		HLA-DQA1*02:01/DQB1*04:02
267-Y SFAKWRVEDLSKRK-		HLA-DRB5*01:01
281		
268-SFAKWRVEDLSKRKP-		HLA-DRB5*01:01
282		
269-FAKWRVEDLSKRKPH-		HLA-DRB5*01:01
283		
		HLA-DQA1*06:01/DQB1*04:02
		HLA-DQA1*02:01/DQB1*04:02
		HLA-DRB1*08:01
		HLA-DPA1*01:03/DPB1*02:01
		HLA-DQA1*01:01/DQB1*05:01
		HLA-DRB4*01:03
		HLA-DPA1*01:03/DPB1*06:01
		HLA-DQA1*05:01/DQB1*04:02
265-TLYSFAKWRVEDLSK-		HLA-DRB1*13:01
279		HLA-DQA1*02:01/DQB1*04:02
		HLA-DQA1*01:01/DQB1*05:01
271-KWRVEDLSK-	266-LYSFAKWRVEDLSKR-	HLA-DRB1*08:01
279	280	

			HLA-DPA1*01:03/DPB1*02:01
			HLA-DPA1*01:03/DPB1*06:01
			HLA-DRB4*01:03
			HLA-DPA1*03:01/DPB1*04:02
			HLA-DRB1*13:01
		267-YSFQKWRVEDLSKRK-	HLA-DQA1*02:01/DQB1*04:02
		281	HLA-DRB5*01:01
		268-SFAKWRVEDLSKRKP-	
		282	HLA-DRB5*01:01
		269-FAKWRVEDLSKRKPH-	
		283	HLA-DRB5*01:01
		270-AKWRVEDLSKRKPHN-	
		284	HLA-DRB5*01:01
57	281-KPHNDAQFL-		
	289	-	
58	286-AQFLTNKDF-		
	294	-	
59	303-FVGGICNEK-		
	311		
		312-YCAGVVQDHTKVPLL-	
		326	HLA-DRB3*03:01
		314-AGVVQDHTKVPLLMA-	
		328	HLA-DPA1*03:01/DPB1*04:02
60		315-GVVQDHTKVPLLMAI-	
		329	HLA-DPA1*03:01/DPB1*04:02
		316-VVQDHTKVPLLMAIT-	
		330	HLA-DPA1*03:01/DPB1*04:02
	317-VQDHTKVPL-	317-VQDHTKVPLLMAITM-	
	325	331	HLA-DPA1*03:01/DPB1*04:02
		314-AGVVQDHTKVPLLMA-	
		328	HLA-DPA1*03:01/DPB1*04:02
		315-GVVQDHTKVPLLMAI-	
		329	HLA-DPA1*03:01/DPB1*04:02
		316-VVQDHTKVPLLMAIT-	
		330	HLA-DPA1*03:01/DPB1*04:02
		317-VQDHTKVPLLMAITM-	
		331	HLA-DPA1*03:01/DPB1*04:02
61			HLA-DPA1*03:01/DPB1*04:02
		318-QDHTKVPLLMAITMG-	HLA-DQA1*01:02/DQB1*05:01
		332	HLA-DQA1*05:01/DQB1*03:03
			HLA-DRB1*04:04
		319-DHTKVPLLMAITMGH-	HLA-DQA1*01:02/DQB1*05:01
		333	HLA-DQA1*05:01/DQB1*03:03
	320-HTKVPLLMA-	320-HTKVPLLMAITMGHE-	HLA-DRB1*04:04
	328	334	HLA-DQA1*01:02/DQB1*05:01
		317-VQDHTKVPLLMAITM-	
		331	HLA-DPA1*03:01/DPB1*04:02
			HLA-DPA1*03:01/DPB1*04:02
62		318-QDHTKVPLLMAITMG-	HLA-DQA1*01:02/DQB1*05:01
		332	HLA-DQA1*05:01/DQB1*03:03
			HLA-DRB1*04:04
	323-VPLLMAITM-	319-DHTKVPLLMAITMGH-	HLA-DQA1*01:02/DQB1*05:01
	331	333	HLA-DQA1*05:01/DQB1*03:03

	320-HTKVPLLMAITMGHE-334	HLA-DRB1*04:04 HLA-DQA1*01:02/DQB1*05:01 HLA-DRB1*07:01 HLA-DRB1*04:04 HLA-DRB1*09:01 HLA-DQA1*01:02/DQB1*05:01 HLA-DRB4*01:01
	321-TKVPLLMAITMGHEI-335	HLA-DRB1*04:01 HLA-DRB1*08:01 HLA-DRB1*07:01 HLA-DRB1*04:04 HLA-DRB1*09:01 HLA-DQA1*01:02/DQB1*05:01 HLA-DRB4*01:01
	322-KVPLLMAITMGHEIG-336	HLA-DRB1*04:01 HLA-DRB1*08:01 HLA-DRB1*07:01 HLA-DRB1*04:04 HLA-DRB1*09:01 HLA-DQA1*01:02/DQB1*05:01 HLA-DRB4*01:01
	323-VPLLMAITMGHEIGH-337	HLA-DRB1*08:01 HLA-DRB1*04:01 HLA-DRB1*04:04
	319-DHTKVPLLMAITMGH-333	HLA-DQA1*01:02/DQB1*05:01 HLA-DQA1*05:01/DQB1*03:03
	320-HTKVPLLMAITMGHE-334	HLA-DRB1*04:04 HLA-DQA1*01:02/DQB1*05:01 HLA-DRB1*07:01 HLA-DRB1*04:04 HLA-DRB1*09:01 HLA-DQA1*01:02/DQB1*05:01 HLA-DRB4*01:01
63	321-TKVPLLMAITMGHEI-335	HLA-DRB1*04:01 HLA-DRB1*08:01 HLA-DRB1*07:01 HLA-DRB1*04:04 HLA-DRB1*09:01 HLA-DQA1*01:02/DQB1*05:01 HLA-DRB4*01:01
	322-KVPLLMAITMGHEIG-336	HLA-DRB1*04:01 HLA-DRB1*08:01
325-LLMAITMGH-333	323-VPLLMAITMGHEIGH-337	HLA-DRB1*07:01 HLA-DRB1*04:04



		HLA-DRB1*09:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DRB4*01:01
		HLA-DRB1*08:01
		HLA-DRB1*04:01
		HLA-DRB1*07:01
		HLA-DRB1*04:04
		HLA-DRB1*09:01
324-PLLMAITMGHEIGHN-		HLA-DRB1*08:01
338		HLA-DQA1*01:02/DQB1*05:01
		HLA-DRB1*07:01
		HLA-DRB1*09:01
325-LLMAITMGHEIGHNL-		HLA-DRB1*04:04
339		HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DRB1*04:04
		HLA-DRB1*09:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DRB4*01:01
321-TKVPLLMAITMGHEI-		HLA-DRB1*04:01
335		HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DRB1*04:04
		HLA-DRB1*09:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DRB4*01:01
322-KVPLLMAITMGHEIG-		HLA-DRB1*04:01
336		HLA-DRB1*08:01
		HLA-DRB1*07:01
		HLA-DRB1*04:04
		HLA-DRB1*09:01
		HLA-DQA1*01:02/DQB1*05:01
		HLA-DRB4*01:01
323-VPLLMAITMGHEIGH-		HLA-DRB1*08:01
337		HLA-DRB1*04:01
		HLA-DRB1*07:01
		HLA-DRB1*04:04
		HLA-DRB1*09:01
324-PLLMAITMGHEIGHN-		HLA-DRB1*08:01
338		HLA-DQA1*01:02/DQB1*05:01
		HLA-DRB1*07:01
		HLA-DRB1*09:01
327-MAITMGHEI-	325-LLMAITMGHEIGHNL-	HLA-DRB1*04:04
335	339	HLA-DRB1*08:01

		326-LMAITMGHEIGHNLG-340	HLA-DRB1*07:01 HLA-DRB1*09:01
		327-MAITMGHEIGHNLGM-341	HLA-DRB1*07:01 HLA-DRB1*09:01
65	333-HEIGHNLGM-341	327-MAITMGHEIGHNLGM-341	HLA-DRB1*07:01 HLA-DRB1*09:01
66	366-KFSDCSRNY-374		
67	367-FSDCSRNY-375		
		370-CSRNYQKFLKDRKP-384	HLA-DRB1*11:01
68	371-SRNYQKFL-379	371-SRNYQKFLKDRKPE-385	HLA-DRB1*11:01 HLA-DRB1*08:01
		370-CSRNYQKFLKDRKP-384	HLA-DRB1*11:01
		371-SRNYQKFLKDRKPE-385	HLA-DRB1*11:01 HLA-DRB1*08:01
69			HLA-DRB1*08:01
	372-RNYQKFLK-380	372-RNYQKFLKDRKPEC-386	HLA-DRB1*16:02 HLA-DRB1*11:01
		370-CSRNYQKFLKDRKP-384	HLA-DRB1*11:01
		371-SRNYQKFLKDRKPE-385	HLA-DRB1*11:01 HLA-DRB1*08:01
			HLA-DRB1*08:01
70		372-RNYQKFLKDRKPEC-386	HLA-DRB1*16:02 HLA-DRB1*11:01
			HLA-DRB3*01:01
		373-NYYQKFLKDRKPECL-387	HLA-DRB1*16:02 HLA-DRB1*11:01
	374-YYQKFLKDR-382	374-YYQKFLKDRKPECLF-388	HLA-DRB3*01:01 HLA-DRB1*16:02
		387-LFKKPLRTDTVSTPV-401	HLA-DRB3*03:01 HLA-DRB1*03:01
			HLA-DRB1*03:01
		388-FKKPLRTDTVSTPVS-402	HLA-DRB1*04:01 HLA-DQA1*02:01/DQB1*03:03
71			HLA-DRB1*03:01 HLA-DRB3*03:01
			HLA-DQA1*02:01/DQB1*03:03
		389-KKPLRTDTVSTPVSG-403	HLA-DRB1*04:01 HLA-DQA1*01:02/DQB1*05:01
			HLA-DQA1*02:01/DQB1*03:03
	393-RTDTVSTPV-401	390-KPLRTDTVSTPVSGN-404	HLA-DRB3*03:01 HLA-DRB1*03:01

			HLA-DQA1*05:01/DQB1*03:03
			HLA-DRB1*04:01
			HLA-DQA1*01:02/DQB1*05:01
	391-PLRTDTVSTPVSUNE-		HLA-DQA1*02:01/DQB1*03:03
	405		HLA-DQA1*05:01/DQB1*03:03
	392-LRTDTVSTPVSUNE-		HLA-DQA1*02:01/DQB1*03:03
	406		HLA-DQA1*05:01/DQB1*03:03
	393-RTDTVSTPVSUNEPL-		HLA-DQA1*02:01/DQB1*03:03
	407		HLA-DQA1*05:01/DQB1*03:03
	393-RTDTVSTPVSUNEPL-		HLA-DQA1*02:01/DQB1*03:03
	407		HLA-DQA1*05:01/DQB1*03:03
	394-TDTVSTPVSUNEPL-		
	408		HLA-DQA1*02:01/DQB1*03:03
	395-DTVSTPVSUNEPL-		
	409		HLA-DRB1*13:02
72	396-TVSTPVSUNEPL-	410	HLA-DRB1*13:02
	397-VSTPVSUNEPL-	411	HLA-DRB1*13:02
	398-STPVSUNEPL-	412	HLA-DRB1*13:02
	399-TPVSUNEPL-	413	HLA-DRB1*13:02
	407		HLA-DRB1*13:02
	395-DTVSTPVSUNEPL-	409	HLA-DRB1*13:02
	396-TVSTPVSUNEPL-	410	HLA-DRB1*13:02
	397-VSTPVSUNEPL-	411	HLA-DRB1*13:02
	398-STPVSUNEPL-	412	HLA-DRB1*13:02
	399-TPVSUNEPL-	413	HLA-DRB1*13:02
73	400-PVSUNEPL-	414	HLA-DRB1*13:02
	401-VSUNEPL-	415	HLA-DQA1*05:01/DQB1*02:01
	409		HLA-DRB4*01:01
	401-VSUNEPL-	415	HLA-DPA1*01:03/DPB1*06:01
	402-SUNEPL-	416	HLA-DQA1*05:01/DQB1*02:01
	416		HLA-DRB4*01:01
74	408-EVITMDDFY-	417	HLA-DPA1*01:03/DPB1*06:01
	403-GNEPL-	417	HLA-DQA1*05:01/DQB1*02:01
	416		HLA-DRB4*01:01
	403-GNEPL-	417	HLA-DPA1*01:03/DPB1*06:01