

**Supplementary Table 1: Prediction of MHC-I Binding Peptides using IEDB-AR**

S. No	Prediction of MHC I Binding epitopes							Percentile Rank
	Allele	Protein	Start	End	Length	Peptide	Method	
1	HLA-A*31:01	Envelope protein	29	38	10	VTLAILTALR	Consensus (ann/smm)	0.97
2	HLA-A*33:03	Envelope protein	51	61	11	LVKPSFYVYSR	netmhcpa_el	0.89
3	HLA-A*02:01	Envelope protein	16	25	10	SVLLFLAFVV	Consensus (ann/smm)	0.87
4	HLA-A*26:01	Envelope protein	12	20	9	LIVNSVLLF	Consensus (ann/smm)	0.86
5	HLA-A*02:06	Envelope protein	17	25	9	VLLFLAFVV	Consensus (ann/smm)	0.84
6	HLA-A*01:01	Envelope protein	49	57	9	VSLVKPSFY	Consensus (ann/smm)	0.83
7	HLA-A*33:03	Envelope protein	59	69	11	YSRVKLNLSR	netmhcpa_el	0.83
8	HLA-A*31:01	Envelope protein	53	61	9	KPSFYVYSR	Consensus (ann/smm)	0.82
9	HLA-A*02:01	Envelope protein	16	24	9	SVLLFLAFV	Consensus (ann/comblib_sidney2008/smm)	0.8
10	HLA-A*02:06	Envelope protein	20	28	9	FLAFVVFLL	Consensus (ann/smm)	0.53
11	HLA-A*02:01	Envelope protein	50	58	9	SLVKPSFYV	Consensus (ann/comblib_sidney2008/smm)	0.5
12	HLA-A*02:01	Envelope protein	18	27	10	LLFLAFVFL	Consensus (ann/smm)	0.48
13	HLA-A*02:06	Envelope protein	16	25	10	SVLLFLAFVV	Consensus (ann/smm)	0.48
14	HLA-A*02:06	Envelope protein	20	29	10	FLAFVVFLLV	Consensus (ann/smm)	0.47
15	HLA-A*02:06	Envelope protein	23	31	9	FVVFLVTL	Consensus (ann/smm)	0.46
16	HLA-A*33:03	Envelope protein	29	38	10	VTLAILTALR	netmhcpa_el	0.45
17	HLA-A*33:03	Envelope protein	60	69	10	SRVKLNLSR	netmhcpa_el	0.45
18	HLA-A*02:01	Envelope protein	26	34	9	FLLVTLAIL	Consensus (ann/comblib_sidney2008/smm)	0.43
19	HLA-A*26:01	Envelope protein	34	42	9	LTALRLCAY	Consensus (ann/smm)	0.41
20	HLA-A*02:06	Envelope protein	50	58	9	SLVKPSFYV	Consensus (ann/smm)	0.4
21	HLA-A*02:01	Envelope protein	19	29	11	LFLAFVVFLLV	Consensus (ann/smm)	0.39
22	HLA-A*33:03	Envelope protein	53	61	9	KPSFYVYSR	netmhcpa_el	0.36
23	HLA-A*02:06	Envelope protein	16	24	9	SVLLFLAFV	Consensus (ann/smm)	0.33
24	HLA-A*02:01	Envelope protein	17	25	9	VLLFLAFVV	Consensus (ann/comblib_sidney2008/smm)	0.3
25	HLA-A*02:01	Envelope protein	20	28	9	FLAFVVFLL	Consensus (ann/comblib_sidney2008/smm)	0.2

26	HLA-A*31:01	Envelope protein	61	69	9	RVKNLNSSR	Consensus (ann/smm)	0.16
27	HLA-A*33:03	Envelope protein	61	69	9	RVKNLNSSR	netmhcpa_el	0.16
28	HLA-A*02:01	Envelope protein	20	29	10	FLAFVVFLLV	Consensus (ann/smm)	0.15
29	HLA-A*33:03	Envelope protein	30	38	9	TLAILTALR	netmhcpa_el	0.13
30	HLA-A*01:01	Envelope protein	34	42	9	LTALRLCAY	Consensus (ann/smm)	0.12
31	HLA-A*02:01	Membrane glycoprotein	108	116	9	SMWSFNPET	Consensus (ann/comblib_sidney2008/smm)	1
32	HLA-A*33:03	Membrane glycoprotein	95	105	11	YFIASFRLFAR	netmhcpa_el	1
33	HLA-A*03:01	Membrane glycoprotein	92	101	10	WLSYFIASFR	Consensus (ann/smm)	0.99
34	HLA-A*33:03	Membrane glycoprotein	149	158	10	LRIAGHHLGR	netmhcpa_el	0.99
35	HLA-A*31:01	Membrane glycoprotein	99	107	9	SFRLFARTR	Consensus (ann/smm)	0.97
36	HLA-A*02:01	Membrane glycoprotein	53	60	8	FLWLLWPV	Consensus (ann/smm)	0.96
37	HLA-A*26:01	Membrane glycoprotein	190	199	10	DSGFAAYSRY	Consensus (ann/smm)	0.95
38	HLA-A*33:03	Membrane glycoprotein	123	131	9	PLHGTILTR	netmhcpa_el	0.95
39	HLA-A*31:01	Membrane glycoprotein	172	180	9	TSRTLSEYK	Consensus (ann/smm)	0.94
40	HLA-A*02:01	Membrane glycoprotein	15	24	10	KLLEQWNLVI	Consensus (ann/smm)	0.91
41	HLA-A*33:03	Membrane glycoprotein	37	44	8	FAYANRNR	netmhcpa_el	0.88
42	HLA-A*02:01	Membrane glycoprotein	52	60	9	IFLWLLWPV	Consensus (ann/comblib_sidney2008/smm)	0.86
43	HLA-A*33:03	Membrane glycoprotein	63	72	10	ACFVLAAYR	netmhcpa_el	0.81
44	HLA-A*02:01	Membrane glycoprotein	53	61	9	FLWLLWPVT	Consensus (ann/comblib_sidney2008/smm)	0.8
45	HLA-A*02:06	Membrane glycoprotein	50	60	11	KLIFLWLLWPV	Consensus (ann/smm)	0.8
46	HLA-A*11:01	Membrane glycoprotein	93	101	9	LSYFIASFR	Consensus (ann/smm)	0.78
47	HLA-A*24:02	Membrane glycoprotein	50	58	9	KLIFLWLLW	Consensus (ann/smm)	0.78
48	HLA-A*24:02	Membrane glycoprotein	198	206	9	RYRIGNYKL	Consensus (ann/smm)	0.77
49	HLA-A*33:03	Membrane glycoprotein	193	200	8	FAAYSRYR	netmhcpa_el	0.77
50	HLA-A*33:03	Membrane glycoprotein	121	131	11	NVPLHGTILTR	netmhcpa_el	0.77
51	HLA-A*33:03	Membrane glycoprotein	136	146	11	SELVIGAVILR	netmhcpa_el	0.77
52	HLA-A*31:01	Membrane glycoprotein	94	101	8	SYFIASFR	ann	0.76
53	HLA-A*33:03	Membrane glycoprotein	141	150	10	GAVILRGHLR	netmhcpa_el	0.76
54	HLA-A*01:01	Membrane glycoprotein	188	196	9	AGDSGFAAY	Consensus (ann/smm)	0.75

55	HLA-A*31:01	Membrane glycoprotein	177	186	10	SYKLGASQR	Consensus (ann/smm)	0.74
56	HLA-A*26:01	Membrane glycoprotein	95	103	9	YFIASFRLF	Consensus (ann/smm)	0.73
57	HLA-A*02:01	Membrane glycoprotein	90	98	9	LMWLSYFIA	Consensus (ann/comblib_sidney2008/smm)	0.7
58	HLA-A*11:01	Membrane glycoprotein	4	14	11	SNGTITVEELK	Consensus (ann/smm)	0.7
59	HLA-A*24:02	Membrane glycoprotein	102	112	11	LFARTRSMWSF	Consensus (ann/smm)	0.7
60	HLA-A*24:02	Membrane glycoprotein	44	52	9	RFLYIIKLI	Consensus (ann/smm)	0.7
61	HLA-A*11:01	Membrane glycoprotein	171	179	9	ATSRTLSYY	Consensus (ann/smm)	0.69
62	HLA-A*02:06	Membrane glycoprotein	89	97	9	GLMWLSYFI	Consensus (ann/smm)	0.68
63	HLA-A*24:02	Membrane glycoprotein	47	55	9	YIIKLIFLW	Consensus (ann/smm)	0.67
64	HLA-A*26:01	Membrane glycoprotein	86	95	10	CLVGLMWLSY	Consensus (ann/smm)	0.67
65	HLA-A*01:01	Membrane glycoprotein	87	95	9	LVGLMWLSY	Consensus (ann/smm)	0.65
66	HLA-A*33:03	Membrane glycoprotein	172	180	9	TSRTLSYYK	netmhcpa_el	0.64
67	HLA-A*33:03	Membrane glycoprotein	35	44	10	LQFAYANRRR	netmhcpa_el	0.64
68	HLA-A*03:01	Membrane glycoprotein	172	180	9	TSRTLSYYK	Consensus (ann/smm)	0.63
69	HLA-A*03:01	Membrane glycoprotein	150	158	9	RIAGHHLGR	Consensus (ann/smm)	0.61
70	HLA-A*24:02	Membrane glycoprotein	90	100	11	LMWLSYFIASF	Consensus (ann/smm)	0.57
71	HLA-A*01:01	Membrane glycoprotein	169	178	10	TVATSRTLSY	Consensus (ann/smm)	0.56
72	HLA-A*02:01	Membrane glycoprotein	89	98	10	GLMWLSYFIA	Consensus (ann/smm)	0.53
73	HLA-A*02:06	Membrane glycoprotein	61	70	10	TLACFVLA AV	Consensus (ann/smm)	0.53
74	HLA-A*33:03	Membrane glycoprotein	65	72	8	FVLA AVYR	netmhcpa_el	0.5
75	HLA-A*03:01	Membrane glycoprotein	93	101	9	LSYFIASFR	Consensus (ann/smm)	0.48
76	HLA-A*33:03	Membrane glycoprotein	96	105	10	FIASFRLFAR	netmhcpa_el	0.48
77	HLA-A*03:01	Membrane glycoprotein	196	205	10	YSRYRIGNYK	Consensus (ann/smm)	0.47
78	HLA-A*31:01	Membrane glycoprotein	150	158	9	RIAGHHLGR	Consensus (ann/smm)	0.46
79	HLA-A*24:02	Membrane glycoprotein	44	53	10	RFLYIIKLIF	Consensus (ann/smm)	0.45
80	HLA-A*02:06	Membrane glycoprotein	65	73	9	FVLA AVYRI	Consensus (ann/smm)	0.44
81	HLA-A*24:02	Membrane glycoprotein	54	62	9	LWLLWPVTL	Consensus (ann/smm)	0.43
82	HLA-A*31:01	Membrane glycoprotein	142	150	9	AVILRGHLR	Consensus (ann/smm)	0.43
83	HLA-A*31:01	Membrane glycoprotein	192	200	9	GFAAYSRYR	Consensus (ann/smm)	0.41

84	HLA-A*02:01	Membrane glycoprotein	15	23	9	KLLEQWNLV	Consensus (ann/comblib_sidney2008/smm)	0.4
85	HLA-A*02:01	Membrane glycoprotein	26	34	9	FLFLTWICL	Consensus (ann/comblib_sidney2008/smm)	0.4
86	HLA-A*02:01	Membrane glycoprotein	65	73	9	FVLAADVRI	Consensus (ann/comblib_sidney2008/smm)	0.4
87	HLA-A*26:01	Membrane glycoprotein	196	204	9	YSRYRIGNY	Consensus (ann/smm)	0.4
88	HLA-A*31:01	Membrane glycoprotein	92	101	10	WLSYFIASFR	Consensus (ann/smm)	0.4
89	HLA-A*01:01	Membrane glycoprotein	31	39	9	WICLLQFAY	Consensus (ann/smm)	0.37
90	HLA-A*11:01	Membrane glycoprotein	6	14	9	GTITVEELK	Consensus (ann/smm)	0.36
91	HLA-A*02:01	Membrane glycoprotein	56	66	11	LLWPVTLACFV	Consensus (ann/smm)	0.35
92	HLA-A*11:01	Membrane glycoprotein	172	180	9	TSRTLSSYYK	Consensus (ann/smm)	0.35
93	HLA-A*31:01	Membrane glycoprotein	191	200	10	SGFAAYSRYR	Consensus (ann/smm)	0.35
94	HLA-A*33:03	Membrane glycoprotein	190	198	9	DSGFAAYSRS	netmhcpa_el	0.35
95	HLA-A*33:03	Membrane glycoprotein	64	72	9	CFVLAADVRS	netmhcpa_el	0.33
96	HLA-A*33:03	Membrane glycoprotein	191	200	10	SGFAAYSRYR	netmhcpa_el	0.32
97	HLA-A*33:03	Membrane glycoprotein	34	42	9	LLQFAYANR	netmhcpa_el	0.31
98	HLA-A*31:01	Membrane glycoprotein	96	105	10	FIASFRIFAR	Consensus (ann/smm)	0.3
99	HLA-A*02:01	Membrane glycoprotein	45	54	10	FLYIKLIFL	Consensus (ann/smm)	0.29
100	HLA-A*31:01	Membrane glycoprotein	97	105	9	IASFRIFAR	Consensus (ann/smm)	0.29
101	HLA-A*33:03	Membrane glycoprotein	94	101	8	SYFIASFR	netmhcpa_el	0.29
102	HLA-A*01:01	Membrane glycoprotein	39	47	9	YANRNRFLY	Consensus (ann/smm)	0.28
103	HLA-A*01:01	Membrane glycoprotein	170	179	10	VATSRTLSSYY	Consensus (ann/smm)	0.28
104	HLA-A*02:01	Membrane glycoprotein	53	62	10	FLWLLWPVTL	Consensus (ann/smm)	0.28
105	HLA-A*02:06	Membrane glycoprotein	52	60	9	IFLWLLWPV	Consensus (ann/smm)	0.28
106	HLA-A*11:01	Membrane glycoprotein	6	15	10	GTITVEELKK	Consensus (ann/smm)	0.27
107	HLA-A*31:01	Membrane glycoprotein	98	107	10	ASFRLFARTR	Consensus (ann/smm)	0.27
108	HLA-A*31:01	Membrane glycoprotein	98	105	8	ASFRLFAR	ann	0.27
109	HLA-A*26:01	Membrane glycoprotein	171	179	9	ATSRTLSSYY	Consensus (ann/smm)	0.26
110	HLA-A*24:02	Membrane glycoprotein	46	55	10	LYIKLIFLW	Consensus (ann/smm)	0.23
111	HLA-A*33:03	Membrane glycoprotein	192	200	9	GFAAYSRYR	netmhcpa_el	0.23
112	HLA-A*33:03	Membrane glycoprotein	137	146	10	ELVIGAVILR	netmhcpa_el	0.23

113	HLA-A*24:02	Membrane glycoprotein	94	102	9	SYFIASFRL	Consensus (ann/smm)	0.22
114	HLA-A*26:01	Membrane glycoprotein	169	178	10	TVATSRTLSTY	Consensus (ann/smm)	0.22
115	HLA-A*33:03	Membrane glycoprotein	177	186	10	SYKLGASQR	netmhcpa_el	0.22
116	HLA-A*02:01	Membrane glycoprotein	61	70	10	TLACFVLAAV	Consensus (ann/smm)	0.21
117	HLA-A*01:01	Membrane glycoprotein	213	221	9	SSDNIALLV	Consensus (ann/smm)	0.2
118	HLA-A*02:01	Membrane glycoprotein	89	97	9	GLMWLSYFI	Consensus (ann/comblib_sidney2008/smm)	0.2
119	HLA-A*24:02	Membrane glycoprotein	57	65	9	LWPVTLACF	Consensus (ann/smm)	0.2
120	HLA-A*24:02	Membrane glycoprotein	95	103	9	YFIASFRLF	Consensus (ann/smm)	0.18
121	HLA-A*01:01	Membrane glycoprotein	171	179	9	ATSRTLSTYY	Consensus (ann/smm)	0.17
122	HLA-A*02:06	Membrane glycoprotein	15	23	9	KLLEQWNLV	Consensus (ann/smm)	0.17
123	HLA-A*11:01	Membrane glycoprotein	170	180	11	VATSRTLSTYYK	Consensus (ann/smm)	0.17
124	HLA-A*31:01	Membrane glycoprotein	93	101	9	LSYFIASFR	Consensus (ann/smm)	0.17
125	HLA-A*02:01	Membrane glycoprotein	26	35	10	FLFLTWICLL	Consensus (ann/smm)	0.15
126	HLA-A*02:01	Membrane glycoprotein	51	60	10	LIFLWLLWPV	Consensus (ann/smm)	0.15
127	HLA-A*02:01	Membrane glycoprotein	50	60	11	KLIFLWLLWPV	Consensus (ann/smm)	0.14
128	HLA-A*03:01	Membrane glycoprotein	171	180	10	ATSRTLSTYYK	Consensus (ann/smm)	0.14
129	HLA-A*24:02	Membrane glycoprotein	19	28	10	QWNLVIGFLF	Consensus (ann/smm)	0.14
130	HLA-A*33:03	Membrane glycoprotein	150	158	9	RIAGHHLGR	netmhcpa_el	0.14
131	HLA-A*24:02	Membrane glycoprotein	91	100	10	MWLSYFIASF	Consensus (ann/smm)	0.13
132	HLA-A*24:02	Membrane glycoprotein	94	103	10	SYFIASFRLF	Consensus (ann/smm)	0.11
133	HLA-A*33:03	Membrane glycoprotein	36	44	9	QFAYANRNR	netmhcpa_el	0.11
134	HLA-A*33:03	Membrane glycoprotein	99	107	9	SFRLFARTR	netmhcpa_el	0.11
135	HLA-A*33:03	Membrane glycoprotein	178	186	9	YYKLGASQR	netmhcpa_el	0.11
136	HLA-A*33:03	Membrane glycoprotein	93	101	9	LSYFIASFR	netmhcpa_el	0.09
137	HLA-A*02:06	Membrane glycoprotein	51	60	10	LIFLWLLWPV	Consensus (ann/smm)	0.08
138	HLA-A*33:03	Membrane glycoprotein	97	105	9	IASFRLFAR	netmhcpa_el	0.08
139	HLA-A*33:03	Membrane glycoprotein	138	146	9	LVIGAVILR	netmhcpa_el	0.07
140	HLA-A*11:01	Membrane glycoprotein	171	180	10	ATSRTLSTYYK	Consensus (ann/smm)	0.06
141	HLA-A*33:03	Membrane glycoprotein	142	150	9	AVILRGHLR	netmhcpa_el	0.06

142	HLA-A*31:01	Nucleocapsid phosphoprotein	32	41	10	RSGARSKQRR	Consensus (ann/smm)	1
143	HLA-A*26:01	Nucleocapsid phosphoprotein	307	315	9	FAPSASAFF	Consensus (ann/smm)	0.99
144	HLA-A*31:01	Nucleocapsid phosphoprotein	361	369	9	KTFPPTPEPK	Consensus (ann/smm)	0.97
145	HLA-A*02:06	Nucleocapsid phosphoprotein	159	167	9	LQLPQGTTL	Consensus (ann/smm)	0.95
146	HLA-A*03:01	Nucleocapsid phosphoprotein	338	347	10	KLDDKDPNFK	Consensus (ann/smm)	0.95
147	HLA-A*11:01	Nucleocapsid phosphoprotein	160	169	10	QLPQGTTLPK	Consensus (ann/smm)	0.95
148	HLA-A*24:02	Nucleocapsid phosphoprotein	85	94	10	GYRRATRRRI	Consensus (ann/smm)	0.95
149	HLA-A*02:06	Nucleocapsid phosphoprotein	222	230	9	LLDRLNQL	Consensus (ann/smm)	0.92
150	HLA-A*01:01	Nucleocapsid phosphoprotein	113	123	11	LGTPPEAGLPY	Consensus (ann/smm)	0.9
151	HLA-A*31:01	Nucleocapsid phosphoprotein	311	319	9	ASAFFGMSR	Consensus (ann/smm)	0.89
152	HLA-A*01:01	Nucleocapsid phosphoprotein	114	123	10	GTGPEAGLPY	Consensus (ann/smm)	0.88
153	HLA-A*33:03	Nucleocapsid phosphoprotein	254	262	9	ASKKPRQKR	netmhcpa_el	0.87
154	HLA-A*31:01	Nucleocapsid phosphoprotein	83	92	10	QIGYYRRATR	Consensus (ann/smm)	0.82
155	HLA-A*02:06	Nucleocapsid phosphoprotein	389	398	10	QQVTLLPAA	Consensus (ann/smm)	0.81
156	HLA-A*26:01	Nucleocapsid phosphoprotein	114	123	10	GTGPEAGLPY	Consensus (ann/smm)	0.81
157	HLA-A*33:03	Nucleocapsid phosphoprotein	78	88	11	SSPDDQIGYYR	netmhcpa_el	0.81
158	HLA-A*02:01	Nucleocapsid phosphoprotein	222	230	9	LLDRLNQL	Consensus (ann/comblib_sidney2008/smm)	0.8
159	HLA-A*33:03	Nucleocapsid phosphoprotein	84	93	10	IGYYRRATRR	netmhcpa_el	0.8
160	HLA-A*33:03	Nucleocapsid phosphoprotein	103	111	9	DLSPRWYFY	netmhcpa_el	0.79
161	HLA-A*33:03	Nucleocapsid phosphoprotein	267	276	10	AYNVTQAFGR	netmhcpa_el	0.79
162	HLA-A*31:01	Nucleocapsid phosphoprotein	84	93	10	IGYYRRATRR	Consensus (ann/smm)	0.77
163	HLA-A*33:03	Nucleocapsid phosphoprotein	83	92	10	QIGYYRRATR	netmhcpa_el	0.76
164	HLA-A*33:03	Nucleocapsid phosphoprotein	141	149	9	TPKDHIQTR	netmhcpa_el	0.75
165	HLA-A*31:01	Nucleocapsid phosphoprotein	267	276	10	AYNVTQAFGR	Consensus (ann/smm)	0.74
166	HLA-A*31:01	Nucleocapsid phosphoprotein	186	195	10	SSSRSRNSSR	Consensus (ann/smm)	0.73
167	HLA-A*33:03	Nucleocapsid phosphoprotein	183	191	9	SSRSSRSR	netmhcpa_el	0.73
168	HLA-A*03:01	Nucleocapsid phosphoprotein	93	102	10	RIRGGDGKMK	Consensus (ann/smm)	0.71
169	HLA-A*02:01	Nucleocapsid phosphoprotein	315	324	10	FGMSRIGMEV	Consensus (ann/smm)	0.7
170	HLA-A*31:01	Nucleocapsid phosphoprotein	254	262	9	ASKKPRQKR	Consensus (ann/smm)	0.7

171	HLA-A*03:01	Nucleocapsid phosphoprotein	160	169	10	QLPQGTTLPK	Consensus (ann/smm)	0.69
172	HLA-A*11:01	Nucleocapsid phosphoprotein	249	257	9	KSAAEASKK	Consensus (ann/smm)	0.67
173	HLA-A*24:02	Nucleocapsid phosphoprotein	306	315	10	QFAPSASAFF	Consensus (ann/smm)	0.67
174	HLA-A*03:01	Nucleocapsid phosphoprotein	351	361	11	ILLNKHIDAYK	Consensus (ann/smm)	0.64
175	HLA-A*31:01	Nucleocapsid phosphoprotein	32	40	9	RSGARSKQR	Consensus (ann/smm)	0.63
176	HLA-A*03:01	Nucleocapsid phosphoprotein	361	370	10	KTFPPTPEPKK	Consensus (ann/smm)	0.61
177	HLA-A*33:03	Nucleocapsid phosphoprotein	312	319	8	SAFFGMSR	netmhspan_el	0.57
178	HLA-A*01:01	Nucleocapsid phosphoprotein	77	86	10	NSSPDDQIGY	Consensus (ann/smm)	0.56
179	HLA-A*02:06	Nucleocapsid phosphoprotein	388	397	10	KQQTVTLLPA	Consensus (ann/smm)	0.55
180	HLA-A*31:01	Nucleocapsid phosphoprotein	187	195	9	SSRSRNSR	Consensus (ann/smm)	0.54
181	HLA-A*01:01	Nucleocapsid phosphoprotein	324	333	10	VTPSGTWLTY	Consensus (ann/smm)	0.53
182	HLA-A*26:01	Nucleocapsid phosphoprotein	78	87	10	SSPDDQIGYY	Consensus (ann/smm)	0.53
183	HLA-A*31:01	Nucleocapsid phosphoprotein	310	319	10	SASAFFGMSR	Consensus (ann/smm)	0.52
184	HLA-A*33:03	Nucleocapsid phosphoprotein	1	10	10	MSDNGPQNQR	netmhspan_el	0.52
185	HLA-A*33:03	Nucleocapsid phosphoprotein	268	276	9	YNVTQAFGR	netmhspan_el	0.5
186	HLA-A*01:01	Nucleocapsid phosphoprotein	77	87	11	NSSPDDQIGYY	Consensus (ann/smm)	0.49
187	HLA-A*11:01	Nucleocapsid phosphoprotein	310	319	10	SASAFFGMSR	Consensus (ann/smm)	0.47
188	HLA-A*03:01	Nucleocapsid phosphoprotein	249	257	9	KSAAEASKK	Consensus (ann/smm)	0.45
189	HLA-A*31:01	Nucleocapsid phosphoprotein	85	93	9	GYRRATRR	Consensus (ann/smm)	0.45
190	HLA-A*03:01	Nucleocapsid phosphoprotein	352	361	10	LLNKHIDAYK	Consensus (ann/smm)	0.43
191	HLA-A*33:03	Nucleocapsid phosphoprotein	85	93	9	GYRRATRR	netmhspan_el	0.43
192	HLA-A*33:03	Nucleocapsid phosphoprotein	310	319	10	SASAFFGMSR	netmhspan_el	0.4
193	HLA-A*26:01	Nucleocapsid phosphoprotein	290	298	9	ELIRQGTDY	Consensus (ann/smm)	0.39
194	HLA-A*33:03	Nucleocapsid phosphoprotein	285	293	9	NFGDQELIR	netmhspan_el	0.39
195	HLA-A*11:01	Nucleocapsid phosphoprotein	311	319	9	ASAFFGMSR	Consensus (ann/smm)	0.38
196	HLA-A*31:01	Nucleocapsid phosphoprotein	84	92	9	IGYRRATR	Consensus (ann/smm)	0.38
197	HLA-A*33:03	Nucleocapsid phosphoprotein	187	195	9	SSRSRNSR	netmhspan_el	0.36
198	HLA-A*01:01	Nucleocapsid phosphoprotein	103	112	10	DLSRWYFY	Consensus (ann/smm)	0.35
199	HLA-A*11:01	Nucleocapsid phosphoprotein	134	143	10	ATEGALNTPK	Consensus (ann/smm)	0.34

200	HLA-A*26:01	Nucleocapsid phosphoprotein	103	112	10	DLSPRWYFYF	Consensus (ann/smm)	0.31
201	HLA-A*33:03	Nucleocapsid phosphoprotein	181	189	9	QASSRSSSR	netmhcpa_el	0.29
202	HLA-A*11:01	Nucleocapsid phosphoprotein	361	370	10	KTFPPTEPKK	Consensus (ann/smm)	0.28
203	HLA-A*24:02	Nucleocapsid phosphoprotein	86	94	9	YRRATRRRI	Consensus (ann/smm)	0.26
204	HLA-A*33:03	Nucleocapsid phosphoprotein	201	209	9	SSRGTSPPAR	netmhcpa_el	0.25
205	HLA-A*33:03	Nucleocapsid phosphoprotein	140	149	10	NTPKDHIGTR	netmhcpa_el	0.24
206	HLA-A*03:01	Nucleocapsid phosphoprotein	361	369	9	KTFPPTEPK	Consensus (ann/smm)	0.23
207	HLA-A*01:01	Nucleocapsid phosphoprotein	104	112	9	LSPRWYFYF	Consensus (ann/smm)	0.22
208	HLA-A*01:01	Nucleocapsid phosphoprotein	78	87	10	SSPDDQIGYY	Consensus (ann/smm)	0.2
209	HLA-A*33:03	Nucleocapsid phosphoprotein	84	92	9	IGYRRATR	netmhcpa_el	0.2
210	HLA-A*33:03	Nucleocapsid phosphoprotein	311	319	9	ASAFFGMSR	netmhcpa_el	0.17
211	HLA-A*31:01	Nucleocapsid phosphoprotein	100	107	8	KMKDLSPP	ann	0.15
212	HLA-A*11:01	Nucleocapsid phosphoprotein	361	369	9	KTFPPTEPK	Consensus (ann/smm)	0.11
213	HLA-A*33:03	Nucleocapsid phosphoprotein	269	277	9	NVTQAFGR	netmhcpa_el	0.11
214	HLA-A*11:01	ORF10 protein	11	20	10	FTIYSLLCR	Consensus (ann/smm)	0.97
215	HLA-A*02:06	ORF10 protein	28	37	10	AQVDVVNFNL	Consensus (ann/smm)	0.95
216	HLA-A*33:03	ORF10 protein	16	24	9	LLLCRMNSR	netmhcpa_el	0.91
217	HLA-A*24:02	ORF10 protein	13	21	9	IYSLLCRM	Consensus (ann/smm)	0.88
218	HLA-A*03:01	ORF10 protein	12	20	9	TIYSLLCR	Consensus (ann/smm)	0.77
219	HLA-A*02:01	ORF10 protein	7	16	10	FAFPFTIYSL	Consensus (ann/smm)	0.58
220	HLA-A*26:01	ORF10 protein	11	19	9	FTIYSLLC	Consensus (ann/smm)	0.54
221	HLA-A*11:01	ORF10 protein	12	20	9	TIYSLLCR	Consensus (ann/smm)	0.53
222	HLA-A*02:06	ORF10 protein	7	16	10	FAFPFTIYSL	Consensus (ann/smm)	0.48
223	HLA-A*26:01	ORF10 protein	5	14	10	NVFAFPFTIY	Consensus (ann/smm)	0.48
224	HLA-A*33:03	ORF10 protein	12	20	9	TIYSLLCR	netmhcpa_el	0.27
225	HLA-A*24:02	ORF10 protein	2	11	10	GYINVFAFPF	Consensus (ann/smm)	0.13
226	HLA-A*01:01	orf1ab polyprotein	614	621	8	TNIFGTVY	Consensus (ann/smm)	1
227	HLA-A*01:01	orf1ab polyprotein	219	229	11	LDVIDTKRGVY	Consensus (ann/smm)	1
228	HLA-A*01:01	orf1ab polyprotein	1246	1256	11	TKFLTENLLLY	Consensus (ann/smm)	1

229	HLA-A*01:01	orf1ab polyprotein	2383	2392	10	MYIFFASFYY	Consensus (ann/smm)	1
230	HLA-A*01:01	orf1ab polyprotein	2925	2934	10	ASGKPVPCYCY	Consensus (ann/smm)	1
231	HLA-A*01:01	orf1ab polyprotein	5614	5623	10	HFAIGLALYY	Consensus (ann/smm)	1
232	HLA-A*02:01	orf1ab polyprotein	2373	2381	9	QMAPISAMV	Consensus (ann/comblib_sidney2008/smm)	1
233	HLA-A*02:01	orf1ab polyprotein	2596	2604	9	NTFSSTFNV	Consensus (ann/comblib_sidney2008/smm)	1
234	HLA-A*02:01	orf1ab polyprotein	3026	3034	9	LLTNMFTPL	Consensus (ann/comblib_sidney2008/smm)	1
235	HLA-A*02:01	orf1ab polyprotein	3605	3613	9	FLYENAFPL	Consensus (ann/comblib_sidney2008/smm)	1
236	HLA-A*02:01	orf1ab polyprotein	3678	3686	9	KLKDCVMYA	Consensus (ann/comblib_sidney2008/smm)	1
237	HLA-A*02:01	orf1ab polyprotein	6204	6212	9	CLAVHECFV	Consensus (ann/comblib_sidney2008/smm)	1
238	HLA-A*02:01	orf1ab polyprotein	6453	6461	9	SLENVAFNV	Consensus (ann/comblib_sidney2008/smm)	1
239	HLA-A*02:06	orf1ab polyprotein	579	587	9	RLIDAMMFT	Consensus (ann/smm)	1
240	HLA-A*03:01	orf1ab polyprotein	5823	5832	10	FLTRNPAWRK	Consensus (ann/smm)	1
241	HLA-A*11:01	orf1ab polyprotein	3258	3268	11	TSAVLQSGFRK	Consensus (ann/smm)	1
242	HLA-A*11:01	orf1ab polyprotein	1768	1776	9	VMYMGTLSTY	Consensus (ann/smm)	1
243	HLA-A*11:01	orf1ab polyprotein	4216	4224	9	VTDTPKGP	Consensus (ann/smm)	1
244	HLA-A*24:02	orf1ab polyprotein	4659	4667	9	KWDLLKYDF	Consensus (ann/smm)	1
245	HLA-A*24:02	orf1ab polyprotein	1422	1431	10	FYFYTSKTTV	Consensus (ann/smm)	1
246	HLA-A*24:02	orf1ab polyprotein	2164	2173	10	VCTNYMPYFF	Consensus (ann/smm)	1
247	HLA-A*24:02	orf1ab polyprotein	2383	2392	10	MYIFFASFYY	Consensus (ann/smm)	1
248	HLA-A*26:01	orf1ab polyprotein	1127	1135	9	DIQLLKSA	Consensus (ann/smm)	1
249	HLA-A*26:01	orf1ab polyprotein	2345	2353	9	AIMQLFFSY	Consensus (ann/smm)	1
250	HLA-A*31:01	orf1ab polyprotein	3058	3066	9	TCLAYYFMR	Consensus (ann/smm)	1
251	HLA-A*31:01	orf1ab polyprotein	3153	3162	10	FYWFFSNYK	Consensus (ann/smm)	1
252	HLA-A*33:03	orf1ab polyprotein	4809	4818	10	KDFYDFAVSK	netmhcpa_el	1
253	HLA-A*33:03	orf1ab polyprotein	6320	6329	10	NSIVCRFDTR	netmhcpa_el	1
254	HLA-A*01:01	orf1ab polyprotein	2384	2392	9	YIFFASFYY	Consensus (ann/smm)	0.99
255	HLA-A*01:01	orf1ab polyprotein	7030	7040	11	RNTNPIQLSSY	Consensus (ann/smm)	0.99
256	HLA-A*01:01	orf1ab polyprotein	1818	1827	10	HGTFTCASEY	Consensus (ann/smm)	0.99
257	HLA-A*02:01	orf1ab polyprotein	3709	3718	10	WTLMNVLT	Consensus (ann/smm)	0.99

258	HLA-A*02:06	orf1ab polyprotein	1083	1092	10	MQVESDDYIA	Consensus (ann/smm)	0.99
259	HLA-A*02:06	orf1ab polyprotein	2322	2330	9	GLVAEWFLA	Consensus (ann/smm)	0.99
260	HLA-A*03:01	orf1ab polyprotein	2727	2735	9	KQIRSAACK	Consensus (ann/smm)	0.99
261	HLA-A*03:01	orf1ab polyprotein	273	282	10	FVFPLNSIIK	Consensus (ann/smm)	0.99
262	HLA-A*03:01	orf1ab polyprotein	3351	3360	10	KLKVDTANPK	Consensus (ann/smm)	0.99
263	HLA-A*03:01	orf1ab polyprotein	6428	6437	10	SAGFSLWVYK	Consensus (ann/smm)	0.99
264	HLA-A*03:01	orf1ab polyprotein	1378	1387	10	MLAHAEETRK	Consensus (ann/smm)	0.99
265	HLA-A*11:01	orf1ab polyprotein	1170	1180	11	RTNVYLAVFDK	Consensus (ann/smm)	0.99
266	HLA-A*24:02	orf1ab polyprotein	2378	2387	10	SAMVRMYIFF	Consensus (ann/smm)	0.99
267	HLA-A*24:02	orf1ab polyprotein	834	843	10	QGYKSVNITF	Consensus (ann/smm)	0.99
268	HLA-A*24:02	orf1ab polyprotein	2269	2278	10	GYLNSTNVTI	Consensus (ann/smm)	0.99
269	HLA-A*26:01	orf1ab polyprotein	2960	2968	9	SIIQFPNTY	Consensus (ann/smm)	0.99
270	HLA-A*26:01	orf1ab polyprotein	3735	3744	10	ALIISVTSNY	Consensus (ann/smm)	0.99
271	HLA-A*31:01	orf1ab polyprotein	5016	5023	8	RAMPNMLR	ann	0.99
272	HLA-A*33:03	orf1ab polyprotein	282	290	9	KTIQPRVEK	netmhcpa_el	0.99
273	HLA-A*33:03	orf1ab polyprotein	2434	2442	9	FVYANGGK	netmhcpa_el	0.99
274	HLA-A*33:03	orf1ab polyprotein	2995	3003	9	GVCVSTSGR	netmhcpa_el	0.99
275	HLA-A*33:03	orf1ab polyprotein	3386	3394	9	SGVYQCAMR	netmhcpa_el	0.99
276	HLA-A*33:03	orf1ab polyprotein	4142	4150	9	NELSPVALR	netmhcpa_el	0.99
277	HLA-A*33:03	orf1ab polyprotein	5015	5023	9	DRAMPNMLR	netmhcpa_el	0.99
278	HLA-A*33:03	orf1ab polyprotein	2676	2686	11	TYNKVENMTPR	netmhcpa_el	0.99
279	HLA-A*01:01	orf1ab polyprotein	4757	4766	10	RLSFKELLVY	Consensus (ann/smm)	0.98
280	HLA-A*02:01	orf1ab polyprotein	3183	3192	10	FLLNKEMYLK	Consensus (ann/smm)	0.98
281	HLA-A*02:01	orf1ab polyprotein	4698	4707	10	CILHCANFNV	Consensus (ann/smm)	0.98
282	HLA-A*02:06	orf1ab polyprotein	2864	2873	10	FVVPGLPGTI	Consensus (ann/smm)	0.98
283	HLA-A*03:01	orf1ab polyprotein	2210	2219	10	CLEASFNYLK	Consensus (ann/smm)	0.98
284	HLA-A*03:01	orf1ab polyprotein	4129	4138	10	TALRANSVVK	Consensus (ann/smm)	0.98
285	HLA-A*03:01	orf1ab polyprotein	1296	1304	9	LTAVVIPTK	Consensus (ann/smm)	0.98
286	HLA-A*11:01	orf1ab polyprotein	906	915	10	YLFDESGEFK	Consensus (ann/smm)	0.98

287	HLA-A*11:01	orf1ab polyprotein	4270	4278	9	CAFAVDAAK	Consensus (ann/smm)	0.98
288	HLA-A*11:01	orf1ab polyprotein	2732	2741	10	AAKKNLPPFK	Consensus (ann/smm)	0.98
289	HLA-A*24:02	orf1ab polyprotein	2330	2339	10	AYILFTRFFY	Consensus (ann/smm)	0.98
290	HLA-A*24:02	orf1ab polyprotein	3391	3399	9	CAMRPNFTI	Consensus (ann/smm)	0.98
291	HLA-A*26:01	orf1ab polyprotein	3152	3160	9	HFYWFFSNY	Consensus (ann/smm)	0.98
292	HLA-A*33:03	orf1ab polyprotein	2192	2200	9	ASMPTTIK	netmhcpa_el	0.98
293	HLA-A*33:03	orf1ab polyprotein	3443	3452	10	NFYGPFVDRQ	netmhcpa_el	0.98
294	HLA-A*33:03	orf1ab polyprotein	4952	4961	10	VSICSTMTNR	netmhcpa_el	0.98
295	HLA-A*01:01	orf1ab polyprotein	3646	3654	9	TVAYFNMVY	Consensus (ann/smm)	0.97
296	HLA-A*02:01	orf1ab polyprotein	480	488	9	FSASTSAFV	Consensus (ann/comblib_sidney2008/smm)	0.97
297	HLA-A*02:01	orf1ab polyprotein	2234	2243	10	LLSVCLGSL	Consensus (ann/smm)	0.97
298	HLA-A*02:06	orf1ab polyprotein	14	23	10	VQLSLPVLQV	Consensus (ann/smm)	0.97
299	HLA-A*02:06	orf1ab polyprotein	3085	3094	10	FLMSFTVLCL	Consensus (ann/smm)	0.97
300	HLA-A*02:06	orf1ab polyprotein	5848	5857	10	KILGLPTQTV	Consensus (ann/smm)	0.97
301	HLA-A*02:06	orf1ab polyprotein	5023	5031	9	RIMASLVLA	Consensus (ann/smm)	0.97
302	HLA-A*03:01	orf1ab polyprotein	693	701	9	IIGGAKLK	Consensus (ann/smm)	0.97
303	HLA-A*03:01	orf1ab polyprotein	3672	3680	9	TLSGFKFK	Consensus (ann/smm)	0.97
304	HLA-A*03:01	orf1ab polyprotein	1355	1364	10	ILPSIISNEK	Consensus (ann/smm)	0.97
305	HLA-A*11:01	orf1ab polyprotein	3565	3573	9	GVTFQSAVK	Consensus (ann/smm)	0.97
306	HLA-A*26:01	orf1ab polyprotein	2357	2365	9	HFISNSWLM	Consensus (ann/smm)	0.97
307	HLA-A*26:01	orf1ab polyprotein	4518	4526	9	DLVYALRHF	Consensus (ann/smm)	0.97
308	HLA-A*26:01	orf1ab polyprotein	1021	1028	8	QTIEVNSF	Consensus (ann/smm)	0.97
309	HLA-A*26:01	orf1ab polyprotein	3646	3655	10	TVAYFNMVYM	Consensus (ann/smm)	0.97
310	HLA-A*26:01	orf1ab polyprotein	5630	5638	9	YTACSHAAV	Consensus (ann/smm)	0.97
311	HLA-A*31:01	orf1ab polyprotein	6365	6373	9	KQLPFFYYS	Consensus (ann/smm)	0.97
312	HLA-A*33:03	orf1ab polyprotein	5760	5767	8	MFLGTCRR	netmhcpa_el	0.97
313	HLA-A*33:03	orf1ab polyprotein	5824	5831	8	LTRNPAWR	netmhcpa_el	0.97
314	HLA-A*01:01	orf1ab polyprotein	6851	6861	11	YLNTLTLAVPY	Consensus (ann/smm)	0.96
315	HLA-A*01:01	orf1ab polyprotein	4415	4424	10	GTGTSTDVYV	Consensus (ann/smm)	0.96

316	HLA-A*02:01	orf1ab polyprotein	6245	6254	10	ALLADKFPVL	Consensus (ann/smm)	0.96
317	HLA-A*02:06	orf1ab polyprotein	5180	5189	10	YQNNVFMSEA	Consensus (ann/smm)	0.96
318	HLA-A*03:01	orf1ab polyprotein	6532	6541	10	AANTVIWDYK	Consensus (ann/smm)	0.96
319	HLA-A*03:01	orf1ab polyprotein	5254	5263	10	LAIDAYPLTK	Consensus (ann/smm)	0.96
320	HLA-A*11:01	orf1ab polyprotein	6647	6656	10	TQSRNLQEFK	Consensus (ann/smm)	0.96
321	HLA-A*11:01	orf1ab polyprotein	5792	5800	9	SAQCFKMFY	Consensus (ann/smm)	0.96
322	HLA-A*11:01	orf1ab polyprotein	6386	6394	9	SDIDYVPLK	Consensus (ann/smm)	0.96
323	HLA-A*24:02	orf1ab polyprotein	6316	6324	9	RYPANSIVC	Consensus (ann/smm)	0.96
324	HLA-A*24:02	orf1ab polyprotein	4025	4034	10	VTSAMQTMLF	Consensus (ann/smm)	0.96
325	HLA-A*26:01	orf1ab polyprotein	2088	2096	9	EEVGHTDLM	Consensus (ann/smm)	0.96
326	HLA-A*26:01	orf1ab polyprotein	3753	3761	9	FLARGIVFM	Consensus (ann/smm)	0.96
327	HLA-A*26:01	orf1ab polyprotein	1503	1512	10	ETISLAGSYK	Consensus (ann/smm)	0.96
328	HLA-A*26:01	orf1ab polyprotein	7020	7028	9	YVMHANYIF	Consensus (ann/smm)	0.96
329	HLA-A*31:01	orf1ab polyprotein	3748	3756	9	VTTVMFLAR	Consensus (ann/smm)	0.96
330	HLA-A*33:03	orf1ab polyprotein	4897	4905	9	PFNKWVKAR	netmhcpa_el	0.96
331	HLA-A*33:03	orf1ab polyprotein	7069	7077	9	ILSLSKGR	netmhcpa_el	0.96
332	HLA-A*33:03	orf1ab polyprotein	3749	3756	8	TTVMFLAR	netmhcpa_el	0.96
333	HLA-A*33:03	orf1ab polyprotein	4750	4757	8	DVNLHSSR	netmhcpa_el	0.96
334	HLA-A*33:03	orf1ab polyprotein	6120	6130	11	MKYFVKIGPER	netmhcpa_el	0.96
335	HLA-A*33:03	orf1ab polyprotein	1176	1185	10	AVFDKNLYDK	netmhcpa_el	0.96
336	HLA-A*33:03	orf1ab polyprotein	4499	4508	10	DGDMVPHISR	netmhcpa_el	0.96
337	HLA-A*01:01	orf1ab polyprotein	2665	2673	9	VTGDSCNNY	Consensus (ann/smm)	0.95
338	HLA-A*01:01	orf1ab polyprotein	4998	5006	9	YSDVENPHL	Consensus (ann/smm)	0.95
339	HLA-A*01:01	orf1ab polyprotein	895	905	11	IDLDEWSMATY	Consensus (ann/smm)	0.95
340	HLA-A*02:01	orf1ab polyprotein	5147	5156	10	MMILSDDAVV	Consensus (ann/smm)	0.95
341	HLA-A*02:01	orf1ab polyprotein	3691	3700	10	LLILMTARTV	Consensus (ann/smm)	0.95
342	HLA-A*02:06	orf1ab polyprotein	6907	6916	10	STLIGDCATV	Consensus (ann/smm)	0.95
343	HLA-A*02:06	orf1ab polyprotein	5674	5684	11	STLEQYVFCTV	Consensus (ann/smm)	0.95
344	HLA-A*02:06	orf1ab polyprotein	3652	3660	9	MVYMPASWV	Consensus (ann/smm)	0.95

345	HLA-A*03:01	orf1ab polyprotein	483	492	10	STSAFVETVK	Consensus (ann/smm)	0.95
346	HLA-A*11:01	orf1ab polyprotein	2404	2414	11	CNSSTCMMCYK	Consensus (ann/smm)	0.95
347	HLA-A*11:01	orf1ab polyprotein	2800	2810	11	TDFSSEIIGYK	Consensus (ann/smm)	0.95
348	HLA-A*11:01	orf1ab polyprotein	5602	5612	11	STLQGPPGTGK	Consensus (ann/smm)	0.95
349	HLA-A*11:01	orf1ab polyprotein	2919	2928	10	CTIFKDasGK	Consensus (ann/smm)	0.95
350	HLA-A*11:01	orf1ab polyprotein	5166	5175	10	GLVASIKNFK	Consensus (ann/smm)	0.95
351	HLA-A*11:01	orf1ab polyprotein	2387	2395	9	FASFYYVWK	Consensus (ann/smm)	0.95
352	HLA-A*24:02	orf1ab polyprotein	4912	4920	9	SYEDQDALF	Consensus (ann/smm)	0.95
353	HLA-A*24:02	orf1ab polyprotein	3010	3019	10	YYRSLPGVFC	Consensus (ann/smm)	0.95
354	HLA-A*24:02	orf1ab polyprotein	3792	3801	10	CYFGLFLLN	Consensus (ann/smm)	0.95
355	HLA-A*24:02	orf1ab polyprotein	4685	4694	10	TYHPNCVNCL	Consensus (ann/smm)	0.95
356	HLA-A*24:02	orf1ab polyprotein	5404	5414	11	SFPLCANGQVF	Consensus (ann/smm)	0.95
357	HLA-A*24:02	orf1ab polyprotein	6783	6793	11	LWCKDGHVETF	Consensus (ann/smm)	0.95
358	HLA-A*26:01	orf1ab polyprotein	1572	1580	9	TTVDNINLH	Consensus (ann/smm)	0.95
359	HLA-A*26:01	orf1ab polyprotein	3144	3153	10	YIICISTKHF	Consensus (ann/smm)	0.95
360	HLA-A*26:01	orf1ab polyprotein	3558	3566	9	DVVRQCSGV	Consensus (ann/smm)	0.95
361	HLA-A*31:01	orf1ab polyprotein	3654	3662	9	YMPASWVMR	Consensus (ann/smm)	0.95
362	HLA-A*31:01	orf1ab polyprotein	5654	5663	10	CSRIIPARAR	Consensus (ann/smm)	0.95
363	HLA-A*33:03	orf1ab polyprotein	2259	2267	9	MPSYCTGYR	netmhcpa_el	0.95
364	HLA-A*33:03	orf1ab polyprotein	4073	4081	9	VIPDYNTYK	netmhcpa_el	0.95
365	HLA-A*33:03	orf1ab polyprotein	5840	5848	9	NSQNAVASK	netmhcpa_el	0.95
366	HLA-A*33:03	orf1ab polyprotein	6080	6088	9	KGLPWNVVR	netmhcpa_el	0.95
367	HLA-A*33:03	orf1ab polyprotein	4031	4038	8	TMLFTMLR	netmhcpa_el	0.95
368	HLA-A*33:03	orf1ab polyprotein	4839	4849	11	NAAISDYDYR	netmhcpa_el	0.95
369	HLA-A*33:03	orf1ab polyprotein	4662	4671	10	LLKYDFTEER	netmhcpa_el	0.95
370	HLA-A*33:03	orf1ab polyprotein	7021	7030	10	VMHANYIFWR	netmhcpa_el	0.95
371	HLA-A*01:01	orf1ab polyprotein	1725	1734	10	LGDVRETMSY	Consensus (ann/smm)	0.94
372	HLA-A*01:01	orf1ab polyprotein	2896	2905	10	CYTPSKLIEY	Consensus (ann/smm)	0.94
373	HLA-A*02:01	orf1ab polyprotein	1248	1258	11	FLTENLLYID	Consensus (ann/smm)	0.94

374	HLA-A*02:01	orf1ab polyprotein	3583	3592	10	LLLTILTSL	Consensus (ann/smm)	0.94
375	HLA-A*02:06	orf1ab polyprotein	4859	4868	10	RQLLFVVEVV	Consensus (ann/smm)	0.94
376	HLA-A*02:06	orf1ab polyprotein	3583	3591	9	LLLTILTSL	Consensus (ann/smm)	0.94
377	HLA-A*02:06	orf1ab polyprotein	6782	6790	9	MLWCKDGHV	Consensus (ann/smm)	0.94
378	HLA-A*02:06	orf1ab polyprotein	3659	3667	9	WVMRIMTWL	Consensus (ann/smm)	0.94
379	HLA-A*03:01	orf1ab polyprotein	6117	6125	9	LTSMKYFVK	Consensus (ann/smm)	0.94
380	HLA-A*03:01	orf1ab polyprotein	1712	1720	9	ALILAYCNK	Consensus (ann/smm)	0.94
381	HLA-A*03:01	orf1ab polyprotein	6072	6080	9	KHLIPLMYK	Consensus (ann/smm)	0.94
382	HLA-A*03:01	orf1ab polyprotein	5470	5479	10	KLSYGIATVR	Consensus (ann/smm)	0.94
383	HLA-A*11:01	orf1ab polyprotein	5516	5526	11	KVQIGEYTFEK	Consensus (ann/smm)	0.94
384	HLA-A*11:01	orf1ab polyprotein	5925	5934	10	QAENVTGLFK	Consensus (ann/smm)	0.94
385	HLA-A*11:01	orf1ab polyprotein	2487	2497	11	SSYIVDSVTVK	Consensus (ann/smm)	0.94
386	HLA-A*24:02	orf1ab polyprotein	4026	4034	9	TSAMQTMLF	Consensus (ann/smm)	0.94
387	HLA-A*24:02	orf1ab polyprotein	6006	6014	9	RHVRAWIGF	Consensus (ann/smm)	0.94
388	HLA-A*24:02	orf1ab polyprotein	6106	6115	10	VVFVLWAHGF	Consensus (ann/smm)	0.94
389	HLA-A*26:01	orf1ab polyprotein	1625	1634	10	DTLRVEAFEY	Consensus (ann/smm)	0.94
390	HLA-A*33:03	orf1ab polyprotein	460	468	9	NINIVGDFK	netmhcpa_el	0.94
391	HLA-A*33:03	orf1ab polyprotein	5025	5032	8	MASLVLAR	netmhcpa_el	0.94
392	HLA-A*33:03	orf1ab polyprotein	175	184	10	RELNGGAYTR	netmhcpa_el	0.94
393	HLA-A*33:03	orf1ab polyprotein	4566	4575	10	VYANLGERVR	netmhcpa_el	0.94
394	HLA-A*01:01	orf1ab polyprotein	2905	2914	10	YDFATSACV	Consensus (ann/smm)	0.93
395	HLA-A*03:01	orf1ab polyprotein	4273	4281	9	AVDAAKAYK	Consensus (ann/smm)	0.93
396	HLA-A*03:01	orf1ab polyprotein	6241	6250	10	VVKAALLADK	Consensus (ann/smm)	0.93
397	HLA-A*11:01	orf1ab polyprotein	3824	3832	9	NSQGLLPPK	Consensus (ann/smm)	0.93
398	HLA-A*26:01	orf1ab polyprotein	4862	4871	10	LFVVEVDKY	Consensus (ann/smm)	0.93
399	HLA-A*26:01	orf1ab polyprotein	878	886	9	AVIKTLQPV	Consensus (ann/smm)	0.93
400	HLA-A*31:01	orf1ab polyprotein	2258	2267	10	GMPSYCTGYR	Consensus (ann/smm)	0.93
401	HLA-A*33:03	orf1ab polyprotein	716	724	9	LYRKCVKSR	netmhcpa_el	0.93
402	HLA-A*33:03	orf1ab polyprotein	4029	4038	10	MQTMLFTMLR	netmhcpa_el	0.93

403	HLA-A*02:06	orf1ab polyprotein	2372	2381	10	VQMAPISAMV	Consensus (ann/smm)	0.92
404	HLA-A*02:06	orf1ab polyprotein	3774	3782	9	NTLQCIMLV	Consensus (ann/smm)	0.92
405	HLA-A*03:01	orf1ab polyprotein	3227	3236	10	REAACCHLAK	Consensus (ann/smm)	0.92
406	HLA-A*11:01	orf1ab polyprotein	3342	3351	10	GHSMQNCVLK	Consensus (ann/smm)	0.92
407	HLA-A*24:02	orf1ab polyprotein	2778	2787	10	LVFLFVAEIF	Consensus (ann/smm)	0.92
408	HLA-A*26:01	orf1ab polyprotein	5679	5687	9	YVFCTVNAL	Consensus (ann/smm)	0.92
409	HLA-A*31:01	orf1ab polyprotein	4323	4331	9	GASCCLYCR	Consensus (ann/smm)	0.92
410	HLA-A*31:01	orf1ab polyprotein	4892	4900	9	KSAGFPFNK	Consensus (ann/smm)	0.92
411	HLA-A*31:01	orf1ab polyprotein	5272	5281	10	VFHLYLQYIR	Consensus (ann/smm)	0.92
412	HLA-A*33:03	orf1ab polyprotein	1172	1180	9	NVYLAVFDK	netmhcpa_el	0.92
413	HLA-A*33:03	orf1ab polyprotein	2167	2175	9	NYMPYFFTL	netmhcpa_el	0.92
414	HLA-A*33:03	orf1ab polyprotein	4241	4251	11	MVLGSLAATVR	netmhcpa_el	0.92
415	HLA-A*02:01	orf1ab polyprotein	3098	3107	10	YSFLPGVYSV	Consensus (ann/smm)	0.91
416	HLA-A*02:01	orf1ab polyprotein	2358	2367	10	FISNSWLMWL	Consensus (ann/smm)	0.91
417	HLA-A*02:01	orf1ab polyprotein	6659	6668	10	SQMEIDFLEL	Consensus (ann/smm)	0.91
418	HLA-A*02:06	orf1ab polyprotein	619	627	9	TVYEKLPV	Consensus (ann/smm)	0.91
419	HLA-A*11:01	orf1ab polyprotein	6384	6394	11	VVSDIDYVPLK	Consensus (ann/smm)	0.91
420	HLA-A*11:01	orf1ab polyprotein	1398	1407	10	IVSTIQRKYK	Consensus (ann/smm)	0.91
421	HLA-A*26:01	orf1ab polyprotein	182	190	9	YTRYVDNNF	Consensus (ann/smm)	0.91
422	HLA-A*26:01	orf1ab polyprotein	501	509	9	QIVESCGNF	Consensus (ann/smm)	0.91
423	HLA-A*31:01	orf1ab polyprotein	2002	2011	10	TYKPNTWCIR	Consensus (ann/smm)	0.91
424	HLA-A*01:01	orf1ab polyprotein	5251	5259	9	FVSLAIDAY	Consensus (ann/smm)	0.9
425	HLA-A*01:01	orf1ab polyprotein	2099	2107	9	YVDNSSLTI	Consensus (ann/smm)	0.9
426	HLA-A*01:01	orf1ab polyprotein	3373	3381	9	QTFSVLACY	Consensus (ann/smm)	0.9
427	HLA-A*01:01	orf1ab polyprotein	4164	4172	9	TDDNALAYY	Consensus (ann/smm)	0.9
428	HLA-A*01:01	orf1ab polyprotein	6476	6484	9	VSIINNTVY	Consensus (ann/smm)	0.9
429	HLA-A*01:01	orf1ab polyprotein	2976	2983	8	VTTFDSEY	Consensus (ann/smm)	0.9
430	HLA-A*01:01	orf1ab polyprotein	349	359	11	LTKEGATTCGY	Consensus (ann/smm)	0.9
431	HLA-A*01:01	orf1ab polyprotein	1320	1329	10	VPTDNYITTY	Consensus (ann/smm)	0.9

432	HLA-A*02:01	orf1ab polyprotein	1010	1020	11	PQLEMELTPVV	Consensus (ann/smm)	0.9
433	HLA-A*02:01	orf1ab polyprotein	1387	1395	9	KLMPVCVET	Consensus (ann/comblib_sidney2008/smm)	0.9
434	HLA-A*02:01	orf1ab polyprotein	2347	2355	9	MQLFFSYFA	Consensus (ann/comblib_sidney2008/smm)	0.9
435	HLA-A*02:01	orf1ab polyprotein	5469	5478	10	FKLSYGIATV	Consensus (ann/smm)	0.9
436	HLA-A*02:06	orf1ab polyprotein	2364	2372	9	LMWLIINLV	Consensus (ann/smm)	0.9
437	HLA-A*02:06	orf1ab polyprotein	2373	2381	9	QMAPISAMV	Consensus (ann/smm)	0.9
438	HLA-A*02:06	orf1ab polyprotein	3677	3686	10	FKLKDCVMYA	Consensus (ann/smm)	0.9
439	HLA-A*02:06	orf1ab polyprotein	3916	3925	10	SVLLSMQGAV	Consensus (ann/smm)	0.9
440	HLA-A*11:01	orf1ab polyprotein	458	468	11	KVNINIVGDFK	Consensus (ann/smm)	0.9
441	HLA-A*11:01	orf1ab polyprotein	2385	2395	11	IFFASFYVWVK	Consensus (ann/smm)	0.9
442	HLA-A*11:01	orf1ab polyprotein	5133	5143	11	FVNEFYAYLRK	Consensus (ann/smm)	0.9
443	HLA-A*11:01	orf1ab polyprotein	6669	6678	10	AMDEFIERYK	Consensus (ann/smm)	0.9
444	HLA-A*11:01	orf1ab polyprotein	6760	6768	9	SQDLSVVSK	Consensus (ann/smm)	0.9
445	HLA-A*24:02	orf1ab polyprotein	3127	3135	9	QWMVMFTPL	Consensus (ann/smm)	0.9
446	HLA-A*24:02	orf1ab polyprotein	4704	4713	10	NFNVLSTVF	Consensus (ann/smm)	0.9
447	HLA-A*24:02	orf1ab polyprotein	1813	1821	9	QYELKHGTF	Consensus (ann/smm)	0.9
448	HLA-A*24:02	orf1ab polyprotein	2168	2176	9	YMPYFFLL	Consensus (ann/smm)	0.9
449	HLA-A*24:02	orf1ab polyprotein	2379	2387	9	AMVRMYIFF	Consensus (ann/smm)	0.9
450	HLA-A*24:02	orf1ab polyprotein	3788	3796	9	YFCTCYFGL	Consensus (ann/smm)	0.9
451	HLA-A*24:02	orf1ab polyprotein	5179	5187	9	YYQNNVFMS	Consensus (ann/smm)	0.9
452	HLA-A*24:02	orf1ab polyprotein	4228	4237	10	LYFIKGLNNL	Consensus (ann/smm)	0.9
453	HLA-A*26:01	orf1ab polyprotein	5170	5179	10	SIKNFKSVLY	Consensus (ann/smm)	0.9
454	HLA-A*31:01	orf1ab polyprotein	808	816	9	VTNNTFTLK	Consensus (ann/smm)	0.9
455	HLA-A*31:01	orf1ab polyprotein	1555	1563	9	NLKTLLSLR	Consensus (ann/smm)	0.9
456	HLA-A*31:01	orf1ab polyprotein	4433	4442	10	KVAGFAKFLK	Consensus (ann/smm)	0.9
457	HLA-A*33:03	orf1ab polyprotein	4170	4179	10	AYYNTTKGGR	netmhcpa_el	0.9
458	HLA-A*33:03	orf1ab polyprotein	5533	5542	10	VVYRGTTYK	netmhcpa_el	0.9
459	HLA-A*02:01	orf1ab polyprotein	5290	5299	10	HMLDMYSVML	Consensus (ann/smm)	0.89
460	HLA-A*02:01	orf1ab polyprotein	1011	1020	10	QLEMELTPVV	Consensus (ann/smm)	0.89

461	HLA-A*11:01	orf1ab polyprotein	6055	6064	10	NTDFSRVSAK	Consensus (ann/smm)	0.89
462	HLA-A*11:01	orf1ab polyprotein	6504	6512	9	NVAFELWAK	Consensus (ann/smm)	0.89
463	HLA-A*11:01	orf1ab polyprotein	1090	1098	9	YIATNGPLK	Consensus (ann/smm)	0.89
464	HLA-A*11:01	orf1ab polyprotein	4168	4176	9	ALAYYNTTK	Consensus (ann/smm)	0.89
465	HLA-A*11:01	orf1ab polyprotein	4673	4681	9	KLFDRYFKY	Consensus (ann/smm)	0.89
466	HLA-A*24:02	orf1ab polyprotein	3423	3431	9	CYMHHMELP	Consensus (ann/smm)	0.89
467	HLA-A*24:02	orf1ab polyprotein	4806	4814	9	NFNKDFYDF	Consensus (ann/smm)	0.89
468	HLA-A*31:01	orf1ab polyprotein	5034	5043	10	HTTCCSLSHR	Consensus (ann/smm)	0.89
469	HLA-A*31:01	orf1ab polyprotein	6623	6632	10	AVKTQFNYYK	Consensus (ann/smm)	0.89
470	HLA-A*31:01	orf1ab polyprotein	5656	5663	8	RIIPARAR	ann	0.89
471	HLA-A*33:03	orf1ab polyprotein	5708	5716	9	LSVVNARLR	netmhcpa_el	0.89
472	HLA-A*33:03	orf1ab polyprotein	2808	2818	11	GYKAIDGGVTR	netmhcpa_el	0.89
473	HLA-A*33:03	orf1ab polyprotein	5296	5306	11	SVMLTNDNTSR	netmhcpa_el	0.89
474	HLA-A*33:03	orf1ab polyprotein	1024	1033	10	EVNSFSGYLK	netmhcpa_el	0.89
475	HLA-A*33:03	orf1ab polyprotein	4141	4150	10	NNELSPVALR	netmhcpa_el	0.89
476	HLA-A*33:03	orf1ab polyprotein	6949	6958	10	TYICGFIQQK	netmhcpa_el	0.89
477	HLA-A*01:01	orf1ab polyprotein	6177	6185	9	NLQSNHDLY	Consensus (ann/smm)	0.88
478	HLA-A*01:01	orf1ab polyprotein	5771	5781	11	EIVDTVSAVY	Consensus (ann/smm)	0.88
479	HLA-A*03:01	orf1ab polyprotein	1310	1319	10	TEMLAKALRK	Consensus (ann/smm)	0.88
480	HLA-A*03:01	orf1ab polyprotein	1419	1428	10	GARFYFYTSK	Consensus (ann/smm)	0.88
481	HLA-A*03:01	orf1ab polyprotein	5118	5127	10	RLYECLYRNR	Consensus (ann/smm)	0.88
482	HLA-A*03:01	orf1ab polyprotein	5388	5397	10	YLGGMSSYCK	Consensus (ann/smm)	0.88
483	HLA-A*03:01	orf1ab polyprotein	6292	6301	10	FYSYATHSDK	Consensus (ann/smm)	0.88
484	HLA-A*11:01	orf1ab polyprotein	3646	3654	9	TVAYFNMVY	Consensus (ann/smm)	0.88
485	HLA-A*24:02	orf1ab polyprotein	2357	2365	9	HFISNSWLM	Consensus (ann/smm)	0.88
486	HLA-A*24:02	orf1ab polyprotein	3062	3072	11	YYFMRFRRAFG	Consensus (ann/smm)	0.88
487	HLA-A*26:01	orf1ab polyprotein	1055	1064	10	TVVVNAANVY	Consensus (ann/smm)	0.88
488	HLA-A*26:01	orf1ab polyprotein	3096	3105	10	PVYSFLPGVY	Consensus (ann/smm)	0.88
489	HLA-A*26:01	orf1ab polyprotein	4914	4922	9	EDQDALFAY	Consensus (ann/smm)	0.88

490	HLA-A*31:01	orf1ab polyprotein	3220	3227	8	AMDTTSYR	ann	0.88
491	HLA-A*33:03	orf1ab polyprotein	199	207	9	ECIKDLLAR	netmhcpa_el	0.88
492	HLA-A*33:03	orf1ab polyprotein	537	545	9	ASEAARVVR	netmhcpa_el	0.88
493	HLA-A*33:03	orf1ab polyprotein	2708	2716	9	NIALIWNVK	netmhcpa_el	0.88
494	HLA-A*33:03	orf1ab polyprotein	2852	2860	9	PLIAAVITR	netmhcpa_el	0.88
495	HLA-A*33:03	orf1ab polyprotein	1153	1163	11	IFGADPIHSLR	netmhcpa_el	0.88
496	HLA-A*33:03	orf1ab polyprotein	4393	4402	10	SADAQSFLNR	netmhcpa_el	0.88
497	HLA-A*33:03	orf1ab polyprotein	6808	6817	10	AMPNLYKMQR	netmhcpa_el	0.88
498	HLA-A*03:01	orf1ab polyprotein	1116	1124	9	HVVGPVNVK	Consensus (ann/smm)	0.87
499	HLA-A*03:01	orf1ab polyprotein	4632	4641	10	LLMPILTLTR	Consensus (ann/smm)	0.87
500	HLA-A*11:01	orf1ab polyprotein	482	492	11	ASTSAFVETVK	Consensus (ann/smm)	0.87
501	HLA-A*11:01	orf1ab polyprotein	3893	3902	10	QLHNDILLAK	Consensus (ann/smm)	0.87
502	HLA-A*11:01	orf1ab polyprotein	848	856	9	RIDKVLNEK	Consensus (ann/smm)	0.87
503	HLA-A*26:01	orf1ab polyprotein	3803	3811	9	YFRLTLGVY	Consensus (ann/smm)	0.87
504	HLA-A*26:01	orf1ab polyprotein	4082	4091	10	NTCDGTTFTY	Consensus (ann/smm)	0.87
505	HLA-A*31:01	orf1ab polyprotein	2520	2528	9	HFVNLNLR	Consensus (ann/smm)	0.87
506	HLA-A*31:01	orf1ab polyprotein	2630	2638	9	LSTFISAAR	Consensus (ann/smm)	0.87
507	HLA-A*31:01	orf1ab polyprotein	3206	3215	10	RYLALYNKYK	Consensus (ann/smm)	0.87
508	HLA-A*31:01	orf1ab polyprotein	5884	5891	8	RFNVAITR	ann	0.87
509	HLA-A*33:03	orf1ab polyprotein	2389	2397	9	SFYVWKSYS	netmhcpa_el	0.87
510	HLA-A*33:03	orf1ab polyprotein	2753	2761	9	VVTTKIALK	netmhcpa_el	0.87
511	HLA-A*33:03	orf1ab polyprotein	3690	3698	9	VLLILMTAR	netmhcpa_el	0.87
512	HLA-A*01:01	orf1ab polyprotein	5071	5081	11	GTSSGDATTAY	Consensus (ann/smm)	0.86
513	HLA-A*01:01	orf1ab polyprotein	4162	4171	10	ACTDDNALAY	Consensus (ann/smm)	0.86
514	HLA-A*02:01	orf1ab polyprotein	3838	3847	10	FKLNIKLLGV	Consensus (ann/smm)	0.86
515	HLA-A*03:01	orf1ab polyprotein	1660	1668	9	QVNGLSIK	Consensus (ann/smm)	0.86
516	HLA-A*03:01	orf1ab polyprotein	2919	2928	10	CTIFKDASGK	Consensus (ann/smm)	0.86
517	HLA-A*11:01	orf1ab polyprotein	6456	6464	9	NVAFNVVVK	Consensus (ann/smm)	0.86
518	HLA-A*26:01	orf1ab polyprotein	83	92	10	HVMVELVAEL	Consensus (ann/smm)	0.86

519	HLA-A*26:01	orf1ab polyprotein	3366	3375	10	FVRIQPGQTF	Consensus (ann/smm)	0.86
520	HLA-A*26:01	orf1ab polyprotein	1461	1469	9	EAARYMRS�	Consensus (ann/smm)	0.86
521	HLA-A*26:01	orf1ab polyprotein	5357	5365	9	HVISTSHKL	Consensus (ann/smm)	0.86
522	HLA-A*33:03	orf1ab polyprotein	283	291	9	TIQPRVEKK	netmhcpa_n_el	0.86
523	HLA-A*33:03	orf1ab polyprotein	489	497	9	ETVKGLDYK	netmhcpa_n_el	0.86
524	HLA-A*33:03	orf1ab polyprotein	2976	2985	10	VTTFDSEYCR	netmhcpa_n_el	0.86
525	HLA-A*33:03	orf1ab polyprotein	5470	5479	10	KLSYGIATVR	netmhcpa_n_el	0.86
526	HLA-A*02:01	orf1ab polyprotein	1247	1257	11	KFLTENLLLYI	Consensus (ann/smm)	0.85
527	HLA-A*02:01	orf1ab polyprotein	3122	3131	10	FLAHIQWMVM	Consensus (ann/smm)	0.85
528	HLA-A*02:01	orf1ab polyprotein	3861	3870	10	KMSDVKCTSV	Consensus (ann/smm)	0.85
529	HLA-A*02:01	orf1ab polyprotein	4265	4274	10	TVLSFCFAFAV	Consensus (ann/smm)	0.85
530	HLA-A*02:06	orf1ab polyprotein	2372	2380	9	VQMAPISAM	Consensus (ann/smm)	0.85
531	HLA-A*02:06	orf1ab polyprotein	6199	6207	9	AIMTRCLAV	Consensus (ann/smm)	0.85
532	HLA-A*03:01	orf1ab polyprotein	116	124	9	VAYRKVLLR	Consensus (ann/smm)	0.85
533	HLA-A*11:01	orf1ab polyprotein	4815	4822	8	AVSKGFFK	Consensus (ann/smm)	0.85
534	HLA-A*11:01	orf1ab polyprotein	1309	1319	11	TTEMLAKALRK	Consensus (ann/smm)	0.85
535	HLA-A*11:01	orf1ab polyprotein	1827	1837	11	YTGNYQCQGHYK	Consensus (ann/smm)	0.85
536	HLA-A*24:02	orf1ab polyprotein	1645	1653	9	RYMSALNHT	Consensus (ann/smm)	0.85
537	HLA-A*26:01	orf1ab polyprotein	6352	6361	10	HTPAFDKSAF	Consensus (ann/smm)	0.85
538	HLA-A*33:03	orf1ab polyprotein	1721	1729	9	TVGELGDVR	netmhcpa_n_el	0.85
539	HLA-A*33:03	orf1ab polyprotein	3060	3069	10	LAYYFMRFR	netmhcpa_n_el	0.85
540	HLA-A*01:01	orf1ab polyprotein	4855	4863	9	MCDIRQLLF	Consensus (ann/smm)	0.84
541	HLA-A*02:01	orf1ab polyprotein	806	815	10	MMVTNNTFTL	Consensus (ann/smm)	0.84
542	HLA-A*03:01	orf1ab polyprotein	282	290	9	KTIQPRVEK	Consensus (ann/smm)	0.84
543	HLA-A*03:01	orf1ab polyprotein	5098	5106	9	ALLSTDGNK	Consensus (ann/smm)	0.84
544	HLA-A*03:01	orf1ab polyprotein	3059	3068	10	CLAYYFMRFR	Consensus (ann/smm)	0.84
545	HLA-A*11:01	orf1ab polyprotein	2789	2798	10	LITPVHVMSK	Consensus (ann/smm)	0.84
546	HLA-A*11:01	orf1ab polyprotein	3356	3365	10	TANPKTPKYK	Consensus (ann/smm)	0.84
547	HLA-A*11:01	orf1ab polyprotein	4814	4822	9	FAVSKGFFK	Consensus (ann/smm)	0.84

548	HLA-A*11:01	orf1ab polyprotein	4417	4425	9	GTSTDVVYR	Consensus (ann/smm)	0.84
549	HLA-A*24:02	orf1ab polyprotein	4849	4858	10	RYNLPTMCDI	Consensus (ann/smm)	0.84
550	HLA-A*33:03	orf1ab polyprotein	7039	7047	9	SYSLFDMSK	netmhcpa_el	0.84
551	HLA-A*33:03	orf1ab polyprotein	2865	2875	11	VVPGLPGTILR	netmhcpa_el	0.84
552	HLA-A*33:03	orf1ab polyprotein	3565	3574	10	GVTFQSAVKR	netmhcpa_el	0.84
553	HLA-A*01:01	orf1ab polyprotein	3116	3124	9	LTNDVSFLA	Consensus (ann/smm)	0.83
554	HLA-A*01:01	orf1ab polyprotein	5859	5867	9	SSQGSEYDY	Consensus (ann/smm)	0.83
555	HLA-A*02:06	orf1ab polyprotein	2363	2371	9	WLMWLIINL	Consensus (ann/smm)	0.83
556	HLA-A*02:06	orf1ab polyprotein	6246	6254	9	LLADKFPVL	Consensus (ann/smm)	0.83
557	HLA-A*02:06	orf1ab polyprotein	6851	6859	9	YLNTLTAV	Consensus (ann/smm)	0.83
558	HLA-A*02:06	orf1ab polyprotein	2167	2175	9	NYMPYFFTL	Consensus (ann/smm)	0.83
559	HLA-A*11:01	orf1ab polyprotein	1295	1304	10	VLTAVVIPTK	Consensus (ann/smm)	0.83
560	HLA-A*11:01	orf1ab polyprotein	1681	1689	9	LTLQQLK	Consensus (ann/smm)	0.83
561	HLA-A*11:01	orf1ab polyprotein	1116	1124	9	HVVGPNVVK	Consensus (ann/smm)	0.83
562	HLA-A*24:02	orf1ab polyprotein	3148	3156	9	ISTKHFYWF	Consensus (ann/smm)	0.83
563	HLA-A*24:02	orf1ab polyprotein	3174	3183	10	TFEEAALCTF	Consensus (ann/smm)	0.83
564	HLA-A*26:01	orf1ab polyprotein	4840	4848	9	AAISDYDYY	Consensus (ann/smm)	0.83
565	HLA-A*26:01	orf1ab polyprotein	4505	4514	10	HISRQLTKY	Consensus (ann/smm)	0.83
566	HLA-A*31:01	orf1ab polyprotein	4673	4680	8	KLFDYFK	ann	0.83
567	HLA-A*31:01	orf1ab polyprotein	2507	2515	9	KAGQKYER	Consensus (ann/smm)	0.83
568	HLA-A*33:03	orf1ab polyprotein	5804	5814	11	ITHDVSSAINR	netmhcpa_el	0.83
569	HLA-A*01:01	orf1ab polyprotein	2799	2807	9	HTDFSSEII	Consensus (ann/smm)	0.82
570	HLA-A*01:01	orf1ab polyprotein	1787	1796	10	CTCGKQATKY	Consensus (ann/smm)	0.82
571	HLA-A*02:01	orf1ab polyprotein	6749	6758	10	LLDDFVEII	Consensus (ann/smm)	0.82
572	HLA-A*02:06	orf1ab polyprotein	1444	1453	10	TLVTMPLGYV	Consensus (ann/smm)	0.82
573	HLA-A*02:06	orf1ab polyprotein	4180	4188	9	FVLALLSDL	Consensus (ann/smm)	0.82
574	HLA-A*03:01	orf1ab polyprotein	3207	3215	9	YLALYNKYK	Consensus (ann/smm)	0.82
575	HLA-A*03:01	orf1ab polyprotein	4183	4192	10	ALLSDLQDLK	Consensus (ann/smm)	0.82
576	HLA-A*11:01	orf1ab polyprotein	1296	1305	10	LTAVVIPTKK	Consensus (ann/smm)	0.82

577	HLA-A*11:01	orf1ab polyprotein	3391	3400	10	CAMRPNFTIK	Consensus (ann/smm)	0.82
578	HLA-A*11:01	orf1ab polyprotein	6195	6203	9	ASCDAIMTR	Consensus (ann/smm)	0.82
579	HLA-A*11:01	orf1ab polyprotein	5980	5989	10	ISMIMGFKMNY	Consensus (ann/smm)	0.82
580	HLA-A*24:02	orf1ab polyprotein	5178	5186	9	LYYQNNVFM	Consensus (ann/smm)	0.82
581	HLA-A*24:02	orf1ab polyprotein	3718	3727	10	VYKVYYGNAL	Consensus (ann/smm)	0.82
582	HLA-A*24:02	orf1ab polyprotein	3802	3811	10	RYFRLTLGVY	Consensus (ann/smm)	0.82
583	HLA-A*26:01	orf1ab polyprotein	3076	3084	9	HVVAFNLL	Consensus (ann/smm)	0.82
584	HLA-A*31:01	orf1ab polyprotein	2176	2184	9	LLQLCTFTR	Consensus (ann/smm)	0.82
585	HLA-A*33:03	orf1ab polyprotein	3567	3574	8	TFQSAVKR	netmhcpa_el	0.82
586	HLA-A*33:03	orf1ab polyprotein	2411	2420	10	MCYKRNRRATR	netmhcpa_el	0.82
587	HLA-A*33:03	orf1ab polyprotein	2982	2991	10	EYCRHGTCER	netmhcpa_el	0.82
588	HLA-A*33:03	orf1ab polyprotein	5745	5754	10	YFNSVCRLMK	netmhcpa_el	0.82
589	HLA-A*02:01	orf1ab polyprotein	1031	1040	10	YLKLTDNVYI	Consensus (ann/smm)	0.81
590	HLA-A*02:01	orf1ab polyprotein	2323	2332	10	LVAEWFLAYI	Consensus (ann/smm)	0.81
591	HLA-A*02:06	orf1ab polyprotein	2225	2234	10	KLINIIWFL	Consensus (ann/smm)	0.81
592	HLA-A*02:06	orf1ab polyprotein	6803	6812	10	WQPGVAMPNL	Consensus (ann/smm)	0.81
593	HLA-A*03:01	orf1ab polyprotein	1646	1654	9	YMSALNHTK	Consensus (ann/smm)	0.81
594	HLA-A*03:01	orf1ab polyprotein	3878	3886	9	QLRVESSEK	Consensus (ann/smm)	0.81
595	HLA-A*03:01	orf1ab polyprotein	1647	1655	9	MSALNHTKK	Consensus (ann/smm)	0.81
596	HLA-A*03:01	orf1ab polyprotein	3343	3351	9	HSMQNCVLK	Consensus (ann/smm)	0.81
597	HLA-A*11:01	orf1ab polyprotein	6623	6633	11	AVKTQFNYYKK	Consensus (ann/smm)	0.81
598	HLA-A*11:01	orf1ab polyprotein	1419	1428	10	GARFYFYTSK	Consensus (ann/smm)	0.81
599	HLA-A*11:01	orf1ab polyprotein	1647	1655	9	MSALNHTKK	Consensus (ann/smm)	0.81
600	HLA-A*11:01	orf1ab polyprotein	4957	4966	10	TMTNRQFHQK	Consensus (ann/smm)	0.81
601	HLA-A*11:01	orf1ab polyprotein	2749	2757	9	QVVNVVTTK	Consensus (ann/smm)	0.81
602	HLA-A*11:01	orf1ab polyprotein	5101	5110	10	STDGNKIADK	Consensus (ann/smm)	0.81
603	HLA-A*11:01	orf1ab polyprotein	6091	6100	10	IVQMLSDTLK	Consensus (ann/smm)	0.81
604	HLA-A*24:02	orf1ab polyprotein	6301	6309	9	KFTDGVCLF	Consensus (ann/smm)	0.81
605	HLA-A*24:02	orf1ab polyprotein	3114	3123	10	FYLTDVVSFL	Consensus (ann/smm)	0.81

606	HLA-A*26:01	orf1ab polyprotein	2339	2347	9	YVLGLAAIM	Consensus (ann/smm)	0.81
607	HLA-A*33:03	orf1ab polyprotein	237	244	8	EIAWYTER	netmhcpa_el	0.81
608	HLA-A*33:03	orf1ab polyprotein	3652	3662	11	MVYMPASWVMR	netmhcpa_el	0.81
609	HLA-A*33:03	orf1ab polyprotein	2629	2638	10	VLSTFISAAR	netmhcpa_el	0.81
610	HLA-A*01:01	orf1ab polyprotein	1503	1511	9	ETISLAGSY	Consensus (ann/smm)	0.8
611	HLA-A*02:01	orf1ab polyprotein	4630	4639	10	YSLLPILTL	Consensus (ann/smm)	0.8
612	HLA-A*02:01	orf1ab polyprotein	3839	3847	9	KLNIKLLGV	Consensus (ann/comblib_sidney2008/smm)	0.8
613	HLA-A*02:01	orf1ab polyprotein	4632	4640	9	LLMPILTLT	Consensus (ann/comblib_sidney2008/smm)	0.8
614	HLA-A*02:01	orf1ab polyprotein	6750	6758	9	LLDDFVEII	Consensus (ann/comblib_sidney2008/smm)	0.8
615	HLA-A*02:06	orf1ab polyprotein	2358	2367	10	FISNSWLMWL	Consensus (ann/smm)	0.8
616	HLA-A*02:06	orf1ab polyprotein	1148	1156	9	LLSAGIFGA	Consensus (ann/smm)	0.8
617	HLA-A*02:06	orf1ab polyprotein	4614	4623	10	FIQTTPGSGV	Consensus (ann/smm)	0.8
618	HLA-A*02:06	orf1ab polyprotein	5541	5550	10	YKLNVDYFV	Consensus (ann/smm)	0.8
619	HLA-A*03:01	orf1ab polyprotein	510	518	9	KVTKGKAKK	Consensus (ann/smm)	0.8
620	HLA-A*03:01	orf1ab polyprotein	3152	3162	11	HFYWFFSNYK	Consensus (ann/smm)	0.8
621	HLA-A*03:01	orf1ab polyprotein	4011	4021	11	QMYKQARSEDK	Consensus (ann/smm)	0.8
622	HLA-A*11:01	orf1ab polyprotein	3343	3353	11	HSMQNCVLLK	Consensus (ann/smm)	0.8
623	HLA-A*11:01	orf1ab polyprotein	5408	5418	11	CANGQVFGLYK	Consensus (ann/smm)	0.8
624	HLA-A*11:01	orf1ab polyprotein	5024	5033	10	IMASLVLARK	Consensus (ann/smm)	0.8
625	HLA-A*24:02	orf1ab polyprotein	3597	3605	9	STQWSLFFF	Consensus (ann/smm)	0.8
626	HLA-A*24:02	orf1ab polyprotein	4079	4089	11	TYKNTCDGTTF	Consensus (ann/smm)	0.8
627	HLA-A*24:02	orf1ab polyprotein	2338	2346	9	FYVLGLAAI	Consensus (ann/smm)	0.8
628	HLA-A*24:02	orf1ab polyprotein	1645	1654	10	RYMSALNHTK	Consensus (ann/smm)	0.8
629	HLA-A*24:02	orf1ab polyprotein	2449	2458	10	NWNCVNCDF	Consensus (ann/smm)	0.8
630	HLA-A*24:02	orf1ab polyprotein	422	432	11	YWVPRASANIG	Consensus (ann/smm)	0.8
631	HLA-A*26:01	orf1ab polyprotein	4275	4283	9	DAAKAYKDY	Consensus (ann/smm)	0.8
632	HLA-A*26:01	orf1ab polyprotein	4428	4437	10	DIYNDKVAGF	Consensus (ann/smm)	0.8
633	HLA-A*26:01	orf1ab polyprotein	4532	4541	10	DTLKEILVTY	Consensus (ann/smm)	0.8
634	HLA-A*33:03	orf1ab polyprotein	1646	1654	9	YMSALNHTK	netmhcpa_el	0.8

635	HLA-A*33:03	orf1ab polyprotein	2941	2949	9	GSVAYESLR	netmhcpa_el	0.8
636	HLA-A*33:03	orf1ab polyprotein	3699	3706	8	TVYDDGAR	netmhcpa_el	0.8
637	HLA-A*33:03	orf1ab polyprotein	1971	1980	10	DYKHYPSPFK	netmhcpa_el	0.8
638	HLA-A*33:03	orf1ab polyprotein	3197	3206	10	VLLPLTQYNR	netmhcpa_el	0.8
639	HLA-A*33:03	orf1ab polyprotein	3533	3542	10	ELLQNGMNGR	netmhcpa_el	0.8
640	HLA-A*02:06	orf1ab polyprotein	6383	6391	9	QVVSDIDYV	Consensus (ann/smm)	0.79
641	HLA-A*02:06	orf1ab polyprotein	4698	4707	10	CILHCANFNV	Consensus (ann/smm)	0.79
642	HLA-A*02:06	orf1ab polyprotein	5147	5155	9	MMILSDDAV	Consensus (ann/smm)	0.79
643	HLA-A*03:01	orf1ab polyprotein	7053	7061	9	RGTAVMSLK	Consensus (ann/smm)	0.79
644	HLA-A*03:01	orf1ab polyprotein	4905	4914	10	RLYDMSYE	Consensus (ann/smm)	0.79
645	HLA-A*03:01	orf1ab polyprotein	6602	6610	9	GLQPSVGP	Consensus (ann/smm)	0.79
646	HLA-A*03:01	orf1ab polyprotein	5980	5989	10	ISMMGFKMNY	Consensus (ann/smm)	0.79
647	HLA-A*11:01	orf1ab polyprotein	614	623	10	TNIFGTVYEK	Consensus (ann/smm)	0.79
648	HLA-A*11:01	orf1ab polyprotein	6950	6958	9	YICGFIQK	Consensus (ann/smm)	0.79
649	HLA-A*11:01	orf1ab polyprotein	1637	1645	9	TTDPSFLGR	Consensus (ann/smm)	0.79
650	HLA-A*24:02	orf1ab polyprotein	3106	3114	9	SVIYLYLTF	Consensus (ann/smm)	0.79
651	HLA-A*24:02	orf1ab polyprotein	3752	3760	9	MFLARGIVF	Consensus (ann/smm)	0.79
652	HLA-A*26:01	orf1ab polyprotein	899	908	10	EWSMATYYLF	Consensus (ann/smm)	0.79
653	HLA-A*26:01	orf1ab polyprotein	1706	1714	9	EAANFCALI	Consensus (ann/smm)	0.79
654	HLA-A*31:01	orf1ab polyprotein	4967	4975	9	LLKSIAATR	Consensus (ann/smm)	0.79
655	HLA-A*31:01	orf1ab polyprotein	4008	4017	10	AMTQMYQAR	Consensus (ann/smm)	0.79
656	HLA-A*33:03	orf1ab polyprotein	2196	2204	9	TTIAKNTVK	netmhcpa_el	0.79
657	HLA-A*33:03	orf1ab polyprotein	2423	2431	9	CTTIVNGVR	netmhcpa_el	0.79
658	HLA-A*33:03	orf1ab polyprotein	4935	4943	9	NLYAISAK	netmhcpa_el	0.79
659	HLA-A*33:03	orf1ab polyprotein	1554	1563	10	DNLKTLLSLR	netmhcpa_el	0.79
660	HLA-A*01:01	orf1ab polyprotein	1874	1882	9	TTTIKPVY	Consensus (ann/smm)	0.78
661	HLA-A*01:01	orf1ab polyprotein	3862	3870	9	MSDVKCTSV	Consensus (ann/smm)	0.78
662	HLA-A*01:01	orf1ab polyprotein	3645	3654	10	ATVAYFNMVY	Consensus (ann/smm)	0.78
663	HLA-A*01:01	orf1ab polyprotein	6819	6828	10	LLEKCDLQNY	Consensus (ann/smm)	0.78

664	HLA-A*02:06	orf1ab polyprotein	2883	2892	10	HFLPRVFSAV	Consensus (ann/smm)	0.78
665	HLA-A*03:01	orf1ab polyprotein	411	419	9	FSYVGCHNK	Consensus (ann/smm)	0.78
666	HLA-A*03:01	orf1ab polyprotein	5645	5653	9	ALKYLPIDK	Consensus (ann/smm)	0.78
667	HLA-A*03:01	orf1ab polyprotein	906	915	10	YLFDESGEFK	Consensus (ann/smm)	0.78
668	HLA-A*11:01	orf1ab polyprotein	5058	5066	9	MVMCGGSLY	Consensus (ann/smm)	0.78
669	HLA-A*11:01	orf1ab polyprotein	2382	2391	10	RMYIFFASFY	Consensus (ann/smm)	0.78
670	HLA-A*11:01	orf1ab polyprotein	1712	1720	9	ALILAYCNK	Consensus (ann/smm)	0.78
671	HLA-A*24:02	orf1ab polyprotein	3105	3114	10	YSVIYLYLTF	Consensus (ann/smm)	0.78
672	HLA-A*26:01	orf1ab polyprotein	3196	3204	9	DVLLPLTQY	Consensus (ann/smm)	0.78
673	HLA-A*26:01	orf1ab polyprotein	6745	6754	10	SVIDLLDDF	Consensus (ann/smm)	0.78
674	HLA-A*31:01	orf1ab polyprotein	5392	5400	9	MSYYCKSHK	Consensus (ann/smm)	0.78
675	HLA-A*31:01	orf1ab polyprotein	4044	4053	10	ALNNIINNAR	Consensus (ann/smm)	0.78
676	HLA-A*31:01	orf1ab polyprotein	3798	3805	8	CLLNRYFR	ann	0.78
677	HLA-A*33:03	orf1ab polyprotein	5709	5716	8	SVVNARLR	netmhcpa_el	0.78
678	HLA-A*33:03	orf1ab polyprotein	5023	5032	10	RIMASLVLAR	netmhcpa_el	0.78
679	HLA-A*02:01	orf1ab polyprotein	1984	1994	11	KLLHKPIVWHV	Consensus (ann/smm)	0.77
680	HLA-A*02:01	orf1ab polyprotein	2379	2388	10	AMVRMYIFFA	Consensus (ann/smm)	0.77
681	HLA-A*02:06	orf1ab polyprotein	2121	2130	10	TLATHGLAAV	Consensus (ann/smm)	0.77
682	HLA-A*02:06	orf1ab polyprotein	84	92	9	VMVELVAEL	Consensus (ann/smm)	0.77
683	HLA-A*03:01	orf1ab polyprotein	6972	6980	9	HSWNADLYK	Consensus (ann/smm)	0.77
684	HLA-A*03:01	orf1ab polyprotein	675	684	10	VQTFKLVNK	Consensus (ann/smm)	0.77
685	HLA-A*11:01	orf1ab polyprotein	1056	1066	11	VVVNAANVYLK	Consensus (ann/smm)	0.77
686	HLA-A*11:01	orf1ab polyprotein	3645	3654	10	ATVAYFNMVY	Consensus (ann/smm)	0.77
687	HLA-A*11:01	orf1ab polyprotein	329	338	10	TSWQTGDFVK	Consensus (ann/smm)	0.77
688	HLA-A*31:01	orf1ab polyprotein	4953	4961	9	SICSTMTNR	Consensus (ann/smm)	0.77
689	HLA-A*31:01	orf1ab polyprotein	4732	4741	10	FVVSTGYHFR	Consensus (ann/smm)	0.77
690	HLA-A*33:03	orf1ab polyprotein	102	110	9	ETLGLVPH	netmhcpa_el	0.77
691	HLA-A*33:03	orf1ab polyprotein	111	119	9	VGEIPVAYR	netmhcpa_el	0.77
692	HLA-A*33:03	orf1ab polyprotein	3152	3160	9	HFYWFFSNY	netmhcpa_el	0.77

693	HLA-A*33:03	orf1ab polyprotein	3872	3880	9	LLSVLQQLR	netmhcpa_el	0.77
694	HLA-A*33:03	orf1ab polyprotein	5220	5228	9	YLPYPDPSR	netmhcpa_el	0.77
695	HLA-A*33:03	orf1ab polyprotein	5744	5751	8	EYFNSVCR	netmhcpa_el	0.77
696	HLA-A*33:03	orf1ab polyprotein	5819	5826	8	VVREFLTR	netmhcpa_el	0.77
697	HLA-A*33:03	orf1ab polyprotein	4044	4053	10	ALNNIINNAR	netmhcpa_el	0.77
698	HLA-A*33:03	orf1ab polyprotein	5444	5453	10	YILANTCTER	netmhcpa_el	0.77
699	HLA-A*02:01	orf1ab polyprotein	4138	4147	10	KLQNNELSPV	Consensus (ann/smm)	0.76
700	HLA-A*02:01	orf1ab polyprotein	2121	2130	10	TLATHGLAAV	Consensus (ann/smm)	0.76
701	HLA-A*02:06	orf1ab polyprotein	4138	4147	10	KLQNNELSPV	Consensus (ann/smm)	0.76
702	HLA-A*03:01	orf1ab polyprotein	1852	1860	9	LLTKSSEYK	Consensus (ann/smm)	0.76
703	HLA-A*11:01	orf1ab polyprotein	3177	3187	11	EAALCTFLLNK	Consensus (ann/smm)	0.76
704	HLA-A*11:01	orf1ab polyprotein	4505	4513	9	HISRQLTK	Consensus (ann/smm)	0.76
705	HLA-A*11:01	orf1ab polyprotein	2432	2442	11	RSFYVYANGGK	Consensus (ann/smm)	0.76
706	HLA-A*11:01	orf1ab polyprotein	542	550	9	RVVRSIFSR	Consensus (ann/smm)	0.76
707	HLA-A*24:02	orf1ab polyprotein	5110	5119	10	KYVRNLQHRL	Consensus (ann/smm)	0.76
708	HLA-A*24:02	orf1ab polyprotein	3165	3175	11	VVFNGVSFSTF	Consensus (ann/smm)	0.76
709	HLA-A*26:01	orf1ab polyprotein	2788	2796	9	YLITPVHVM	Consensus (ann/smm)	0.76
710	HLA-A*26:01	orf1ab polyprotein	5128	5137	10	DVDTDFVNEF	Consensus (ann/smm)	0.76
711	HLA-A*26:01	orf1ab polyprotein	4072	4080	9	VVIPDYNTY	Consensus (ann/smm)	0.76
712	HLA-A*26:01	orf1ab polyprotein	1581	1590	10	TQVVDMSMY	Consensus (ann/smm)	0.76
713	HLA-A*33:03	orf1ab polyprotein	156	164	9	DFQENWNTK	netmhcpa_el	0.76
714	HLA-A*33:03	orf1ab polyprotein	6456	6464	9	NVAFNVVNK	netmhcpa_el	0.76
715	HLA-A*33:03	orf1ab polyprotein	4418	4425	8	TSTDVVYR	netmhcpa_el	0.76
716	HLA-A*33:03	orf1ab polyprotein	4456	4466	11	NLIDSYFVVKR	netmhcpa_el	0.76
717	HLA-A*33:03	orf1ab polyprotein	2180	2189	10	CTFTRSTNSR	netmhcpa_el	0.76
718	HLA-A*01:01	orf1ab polyprotein	2291	2301	11	CLSGLDSDTY	Consensus (ann/smm)	0.75
719	HLA-A*01:01	orf1ab polyprotein	2253	2262	10	LMSNLGMPSY	Consensus (ann/smm)	0.75
720	HLA-A*02:01	orf1ab polyprotein	4724	4733	10	KIFVDGVPFV	Consensus (ann/smm)	0.75
721	HLA-A*02:06	orf1ab polyprotein	4472	4481	10	YQHEETIYNL	Consensus (ann/smm)	0.75

722	HLA-A*02:06	orf1ab polyprotein	406	414	9	FGGCVFSYV	Consensus (ann/smm)	0.75
723	HLA-A*02:06	orf1ab polyprotein	6109	6117	9	VLWAHGFEL	Consensus (ann/smm)	0.75
724	HLA-A*03:01	orf1ab polyprotein	3979	3988	10	KLKKSILNVAK	Consensus (ann/smm)	0.75
725	HLA-A*11:01	orf1ab polyprotein	110	120	11	HVGEIPVAYRK	Consensus (ann/smm)	0.75
726	HLA-A*26:01	orf1ab polyprotein	755	763	9	EVVLKTGDL	Consensus (ann/smm)	0.75
727	HLA-A*33:03	orf1ab polyprotein	2412	2420	9	CYKRNRATR	netmhcpa_el	0.75
728	HLA-A*33:03	orf1ab polyprotein	3316	3324	9	NYEDLLIRK	netmhcpa_el	0.75
729	HLA-A*33:03	orf1ab polyprotein	5502	5510	9	RNYVFTGYR	netmhcpa_el	0.75
730	HLA-A*33:03	orf1ab polyprotein	5710	5718	9	VVNARLRAK	netmhcpa_el	0.75
731	HLA-A*33:03	orf1ab polyprotein	5969	5977	9	GIPKDMTYR	netmhcpa_el	0.75
732	HLA-A*33:03	orf1ab polyprotein	5111	5118	8	YVRNLQHR	netmhcpa_el	0.75
733	HLA-A*33:03	orf1ab polyprotein	3003	3012	10	RWVLNNDYYR	netmhcpa_el	0.75
734	HLA-A*01:01	orf1ab polyprotein	6285	6295	11	AYKIEELFYSY	Consensus (ann/smm)	0.74
735	HLA-A*01:01	orf1ab polyprotein	3813	3822	10	YLVSTQEFRY	Consensus (ann/smm)	0.74
736	HLA-A*01:01	orf1ab polyprotein	6154	6162	9	HSIGFDYVY	Consensus (ann/smm)	0.74
737	HLA-A*01:01	orf1ab polyprotein	5736	5745	10	LTKGTLEPEY	Consensus (ann/smm)	0.74
738	HLA-A*01:01	orf1ab polyprotein	6673	6682	10	FIERYKLEGY	Consensus (ann/smm)	0.74
739	HLA-A*02:01	orf1ab polyprotein	6115	6124	10	FELTSMKYFV	Consensus (ann/smm)	0.74
740	HLA-A*02:06	orf1ab polyprotein	3121	3130	10	SFLAHIQWMV	Consensus (ann/smm)	0.74
741	HLA-A*11:01	orf1ab polyprotein	5023	5032	10	RIMASLVLAR	Consensus (ann/smm)	0.74
742	HLA-A*11:01	orf1ab polyprotein	806	816	11	MMVTNNTFTLK	Consensus (ann/smm)	0.74
743	HLA-A*11:01	orf1ab polyprotein	2210	2219	10	CLEASFNYLK	Consensus (ann/smm)	0.74
744	HLA-A*24:02	orf1ab polyprotein	2345	2354	10	AIMQLFFSYF	Consensus (ann/smm)	0.74
745	HLA-A*24:02	orf1ab polyprotein	3751	3760	10	VMFLARGIVF	Consensus (ann/smm)	0.74
746	HLA-A*24:02	orf1ab polyprotein	5975	5985	11	TYRRLISMMGF	Consensus (ann/smm)	0.74
747	HLA-A*26:01	orf1ab polyprotein	6003	6011	9	EAIRHVRAW	Consensus (ann/smm)	0.74
748	HLA-A*31:01	orf1ab polyprotein	4632	4641	10	LLMPILTTR	Consensus (ann/smm)	0.74
749	HLA-A*31:01	orf1ab polyprotein	4842	4849	8	ISDYDYR	ann	0.74
750	HLA-A*33:03	orf1ab polyprotein	2407	2415	9	STCMMCYKR	netmhcpa_el	0.74

751	HLA-A*33:03	orf1ab polyprotein	2802	2810	9	FSSEIIGYK	netmhcpa_el	0.74
752	HLA-A*33:03	orf1ab polyprotein	6972	6980	9	HSWNADLYK	netmhcpa_el	0.74
753	HLA-A*33:03	orf1ab polyprotein	4459	4466	8	DSYFVVKR	netmhcpa_el	0.74
754	HLA-A*33:03	orf1ab polyprotein	217	226	10	EQLDFIDTKR	netmhcpa_el	0.74
755	HLA-A*01:01	orf1ab polyprotein	1891	1899	9	EIDPKLDNY	Consensus (ann/smm)	0.73
756	HLA-A*01:01	orf1ab polyprotein	1022	1031	10	TIEVNSFSGY	Consensus (ann/smm)	0.73
757	HLA-A*01:01	orf1ab polyprotein	1823	1831	9	CASEYTGNY	Consensus (ann/smm)	0.73
758	HLA-A*01:01	orf1ab polyprotein	1276	1285	10	ITFLKKDAPY	Consensus (ann/smm)	0.73
759	HLA-A*02:06	orf1ab polyprotein	2230	2238	9	IIWFLLLSV	Consensus (ann/smm)	0.73
760	HLA-A*03:01	orf1ab polyprotein	6429	6437	9	AGFSLWVYK	Consensus (ann/smm)	0.73
761	HLA-A*03:01	orf1ab polyprotein	6732	6741	10	ITDAQTGSSK	Consensus (ann/smm)	0.73
762	HLA-A*03:01	orf1ab polyprotein	2384	2392	9	YIFFASFYY	Consensus (ann/smm)	0.73
763	HLA-A*11:01	orf1ab polyprotein	5038	5046	9	CSLSHRFYR	Consensus (ann/smm)	0.73
764	HLA-A*11:01	orf1ab polyprotein	4840	4849	10	AAISDYDYR	Consensus (ann/smm)	0.73
765	HLA-A*11:01	orf1ab polyprotein	7003	7012	10	FLIGCNLYGK	Consensus (ann/smm)	0.73
766	HLA-A*24:02	orf1ab polyprotein	805	813	9	NMMVNTNTF	Consensus (ann/smm)	0.73
767	HLA-A*26:01	orf1ab polyprotein	5002	5011	10	ENPHLMGWDY	Consensus (ann/smm)	0.73
768	HLA-A*26:01	orf1ab polyprotein	5532	5541	10	AVVYRGTTTY	Consensus (ann/smm)	0.73
769	HLA-A*26:01	orf1ab polyprotein	5568	5577	10	EHYVRITGLY	Consensus (ann/smm)	0.73
770	HLA-A*31:01	orf1ab polyprotein	5489	5497	9	LSWEVGKPR	Consensus (ann/smm)	0.73
771	HLA-A*31:01	orf1ab polyprotein	543	550	8	VVRSIFSR	ann	0.73
772	HLA-A*31:01	orf1ab polyprotein	5792	5801	10	SAQCFKMFYK	Consensus (ann/smm)	0.73
773	HLA-A*33:03	orf1ab polyprotein	2070	2078	9	EVVGDIIK	netmhcpa_el	0.73
774	HLA-A*33:03	orf1ab polyprotein	4633	4641	9	LMPILTLTR	netmhcpa_el	0.73
775	HLA-A*33:03	orf1ab polyprotein	4716	4723	8	TSGGPLVR	netmhcpa_el	0.73
776	HLA-A*33:03	orf1ab polyprotein	2628	2638	11	NVLSTFISAAR	netmhcpa_el	0.73
777	HLA-A*33:03	orf1ab polyprotein	1458	1467	10	NLEEAARYMR	netmhcpa_el	0.73
778	HLA-A*33:03	orf1ab polyprotein	1694	1703	10	ALQDAYRARR	netmhcpa_el	0.73
779	HLA-A*01:01	orf1ab polyprotein	2404	2413	10	CNSSTCMICY	Consensus (ann/smm)	0.72

780	HLA-A*01:01	orf1ab polyprotein	2321	2331	11	FGLVAEWFLAY	Consensus (ann/smm)	0.72
781	HLA-A*01:01	orf1ab polyprotein	5130	5139	10	DTDFVNEFYA	Consensus (ann/smm)	0.72
782	HLA-A*02:01	orf1ab polyprotein	5146	5155	10	SMMILSDDAV	Consensus (ann/smm)	0.72
783	HLA-A*02:01	orf1ab polyprotein	6165	6174	10	FMIDVQQWGF	Consensus (ann/smm)	0.72
784	HLA-A*02:06	orf1ab polyprotein	3467	3475	9	VLAWLYAAV	Consensus (ann/smm)	0.72
785	HLA-A*02:06	orf1ab polyprotein	4480	4488	9	NLLKDCPAV	Consensus (ann/smm)	0.72
786	HLA-A*03:01	orf1ab polyprotein	313	322	10	NQMCLSTLMK	Consensus (ann/smm)	0.72
787	HLA-A*03:01	orf1ab polyprotein	6593	6601	9	VLITEGSVK	Consensus (ann/smm)	0.72
788	HLA-A*03:01	orf1ab polyprotein	5603	5612	10	TLQGGPGTGK	Consensus (ann/smm)	0.72
789	HLA-A*11:01	orf1ab polyprotein	2891	2901	11	AVGNICYTPSK	Consensus (ann/smm)	0.72
790	HLA-A*11:01	orf1ab polyprotein	1645	1654	10	RYMSALNHTK	Consensus (ann/smm)	0.72
791	HLA-A*24:02	orf1ab polyprotein	4811	4820	10	FYDFAVSKGF	Consensus (ann/smm)	0.72
792	HLA-A*26:01	orf1ab polyprotein	2435	2444	10	YVYANGGKGF	Consensus (ann/smm)	0.72
793	HLA-A*26:01	orf1ab polyprotein	4863	4872	10	FVVEVVDKYF	Consensus (ann/smm)	0.72
794	HLA-A*31:01	orf1ab polyprotein	5024	5032	9	IMASLVLAR	Consensus (ann/smm)	0.72
795	HLA-A*31:01	orf1ab polyprotein	2406	2415	10	SSTCMMCYKR	Consensus (ann/smm)	0.72
796	HLA-A*33:03	orf1ab polyprotein	2801	2810	10	DFSSEIIGYK	netmhcpa_el	0.72
797	HLA-A*33:03	orf1ab polyprotein	4632	4641	10	LLMPILTTR	netmhcpa_el	0.72
798	HLA-A*33:03	orf1ab polyprotein	5707	5716	10	DLSVVNARLR	netmhcpa_el	0.72
799	HLA-A*01:01	orf1ab polyprotein	5791	5800	10	KSAQCCKMFY	Consensus (ann/smm)	0.71
800	HLA-A*01:01	orf1ab polyprotein	6668	6677	10	LAMDEFIERY	Consensus (ann/smm)	0.71
801	HLA-A*02:01	orf1ab polyprotein	3025	3034	10	NLLTNMFTPL	Consensus (ann/smm)	0.71
802	HLA-A*02:06	orf1ab polyprotein	3088	3097	10	SFTVLCLTPV	Consensus (ann/smm)	0.71
803	HLA-A*02:06	orf1ab polyprotein	3605	3613	9	FLYENAFPL	Consensus (ann/smm)	0.71
804	HLA-A*02:06	orf1ab polyprotein	4725	4733	9	IFVDGVPFV	Consensus (ann/smm)	0.71
805	HLA-A*02:06	orf1ab polyprotein	6781	6790	10	FMLWCKDGHV	Consensus (ann/smm)	0.71
806	HLA-A*03:01	orf1ab polyprotein	814	822	9	TLKGGAPTK	Consensus (ann/smm)	0.71
807	HLA-A*03:01	orf1ab polyprotein	5791	5801	11	KSAQCCKMFYK	Consensus (ann/smm)	0.71
808	HLA-A*03:01	orf1ab polyprotein	1462	1470	9	AARYMRSRK	Consensus (ann/smm)	0.71

809	HLA-A*11:01	orf1ab polyprotein	4956	4966	11	STMTNRQFHQK	Consensus (ann/smm)	0.71
810	HLA-A*11:01	orf1ab polyprotein	1310	1319	10	TEMLAKALRK	Consensus (ann/smm)	0.71
811	HLA-A*11:01	orf1ab polyprotein	555	564	10	AQNSVRVLQK	Consensus (ann/smm)	0.71
812	HLA-A*26:01	orf1ab polyprotein	1414	1422	9	GVVDYGARF	Consensus (ann/smm)	0.71
813	HLA-A*26:01	orf1ab polyprotein	4732	4740	9	FVVSTGYHF	Consensus (ann/smm)	0.71
814	HLA-A*31:01	orf1ab polyprotein	2328	2336	9	FLAYILFTR	Consensus (ann/smm)	0.71
815	HLA-A*31:01	orf1ab polyprotein	7073	7081	9	LSKGRLIIR	Consensus (ann/smm)	0.71
816	HLA-A*01:01	orf1ab polyprotein	4185	4193	9	LSDLQDLKW	Consensus (ann/smm)	0.7
817	HLA-A*01:01	orf1ab polyprotein	6055	6063	9	NTDFSRVSA	Consensus (ann/smm)	0.7
818	HLA-A*01:01	orf1ab polyprotein	1964	1972	9	NGDVVAIDY	Consensus (ann/smm)	0.7
819	HLA-A*01:01	orf1ab polyprotein	5215	5223	9	GDDYVYLPY	Consensus (ann/smm)	0.7
820	HLA-A*02:01	orf1ab polyprotein	641	649	9	FLRDGWEIV	Consensus (ann/comblib_sidney2008/smm)	0.7
821	HLA-A*02:01	orf1ab polyprotein	2392	2400	9	YVWKSIVHV	Consensus (ann/comblib_sidney2008/smm)	0.7
822	HLA-A*02:01	orf1ab polyprotein	2563	2571	9	QLMCQPILL	Consensus (ann/comblib_sidney2008/smm)	0.7
823	HLA-A*02:01	orf1ab polyprotein	3013	3021	9	SLPGVFCGV	Consensus (ann/comblib_sidney2008/smm)	0.7
824	HLA-A*02:01	orf1ab polyprotein	3807	3815	9	TLGVYDYL	Consensus (ann/comblib_sidney2008/smm)	0.7
825	HLA-A*02:01	orf1ab polyprotein	4283	4291	9	YLASGGQPI	Consensus (ann/comblib_sidney2008/smm)	0.7
826	HLA-A*02:01	orf1ab polyprotein	4480	4488	9	NLLKDCPAV	Consensus (ann/comblib_sidney2008/smm)	0.7
827	HLA-A*02:01	orf1ab polyprotein	4514	4522	9	YTMADLVYA	Consensus (ann/comblib_sidney2008/smm)	0.7
828	HLA-A*02:01	orf1ab polyprotein	5133	5141	9	FVNEFYAYL	Consensus (ann/comblib_sidney2008/smm)	0.7
829	HLA-A*02:01	orf1ab polyprotein	5563	5571	9	TLVPQEHYV	Consensus (ann/comblib_sidney2008/smm)	0.7
830	HLA-A*02:01	orf1ab polyprotein	6782	6790	9	MLWCKDGHV	Consensus (ann/comblib_sidney2008/smm)	0.7
831	HLA-A*02:01	orf1ab polyprotein	6886	6894	9	WLPTGTLV	Consensus (ann/comblib_sidney2008/smm)	0.7
832	HLA-A*02:01	orf1ab polyprotein	6908	6916	9	TLIGDCATV	Consensus (ann/comblib_sidney2008/smm)	0.7
833	HLA-A*02:01	orf1ab polyprotein	2563	2572	10	QLMCQPILL	Consensus (ann/smm)	0.7
834	HLA-A*02:06	orf1ab polyprotein	3466	3474	9	NVLAWLYAA	Consensus (ann/smm)	0.7
835	HLA-A*02:06	orf1ab polyprotein	6695	6704	10	SQLGGLHLI	Consensus (ann/smm)	0.7
836	HLA-A*03:01	orf1ab polyprotein	5899	5908	10	IMSDRDLYDK	Consensus (ann/smm)	0.7
837	HLA-A*03:01	orf1ab polyprotein	2915	2923	9	LAAECTIFK	Consensus (ann/smm)	0.7

838	HLA-A*11:01	orf1ab polyprotein	2388	2395	8	ASFYYVWK	Consensus (ann/smm)	0.7
839	HLA-A*11:01	orf1ab polyprotein	2731	2741	11	SAAKKNNLPFK	Consensus (ann/smm)	0.7
840	HLA-A*11:01	orf1ab polyprotein	4004	4014	11	MADQAMTQMYK	Consensus (ann/smm)	0.7
841	HLA-A*11:01	orf1ab polyprotein	4457	4465	9	LIDSYFVVK	Consensus (ann/smm)	0.7
842	HLA-A*11:01	orf1ab polyprotein	5163	5172	10	ASQGLVASIK	Consensus (ann/smm)	0.7
843	HLA-A*11:01	orf1ab polyprotein	1104	1112	9	VLSGHNLAK	Consensus (ann/smm)	0.7
844	HLA-A*24:02	orf1ab polyprotein	4088	4096	9	TFTYASALW	Consensus (ann/smm)	0.7
845	HLA-A*24:02	orf1ab polyprotein	3606	3615	10	LYENAFLPFA	Consensus (ann/smm)	0.7
846	HLA-A*26:01	orf1ab polyprotein	6154	6162	9	HSIGFDYVY	Consensus (ann/smm)	0.7
847	HLA-A*31:01	orf1ab polyprotein	4417	4425	9	GTSTDVVYR	Consensus (ann/smm)	0.7
848	HLA-A*33:03	orf1ab polyprotein	1311	1318	8	EMLAKALR	netmhcpa_el	0.7
849	HLA-A*01:01	orf1ab polyprotein	5150	5158	9	LSDDAVVCF	Consensus (ann/smm)	0.69
850	HLA-A*01:01	orf1ab polyprotein	3710	3719	10	TLMNVLTLY	Consensus (ann/smm)	0.69
851	HLA-A*02:01	orf1ab polyprotein	6108	6117	10	FVLWAHGFEL	Consensus (ann/smm)	0.69
852	HLA-A*02:01	orf1ab polyprotein	3083	3092	10	LLFLMSFTVL	Consensus (ann/smm)	0.69
853	HLA-A*03:01	orf1ab polyprotein	5824	5832	9	LTRNPAWRK	Consensus (ann/smm)	0.69
854	HLA-A*03:01	orf1ab polyprotein	6669	6678	10	AMDEFIERYK	Consensus (ann/smm)	0.69
855	HLA-A*03:01	orf1ab polyprotein	5058	5066	9	MVMCGGSLY	Consensus (ann/smm)	0.69
856	HLA-A*11:01	orf1ab polyprotein	1024	1033	10	EVNSFSGYLK	Consensus (ann/smm)	0.69
857	HLA-A*11:01	orf1ab polyprotein	3183	3192	10	FLLNKEMYLK	Consensus (ann/smm)	0.69
858	HLA-A*11:01	orf1ab polyprotein	3669	3678	10	MVDTSLSGFK	Consensus (ann/smm)	0.69
859	HLA-A*24:02	orf1ab polyprotein	1918	1928	11	QPYPNASFDNF	Consensus (ann/smm)	0.69
860	HLA-A*26:01	orf1ab polyprotein	3149	3157	9	STKHFWFF	Consensus (ann/smm)	0.69
861	HLA-A*26:01	orf1ab polyprotein	264	273	10	DTFNCEPNF	Consensus (ann/smm)	0.69
862	HLA-A*26:01	orf1ab polyprotein	5153	5162	10	DAVVCFNSTY	Consensus (ann/smm)	0.69
863	HLA-A*31:01	orf1ab polyprotein	2977	2985	9	TFDSEYCR	Consensus (ann/smm)	0.69
864	HLA-A*33:03	orf1ab polyprotein	3355	3363	9	DTANPKTPK	netmhcpa_el	0.69
865	HLA-A*33:03	orf1ab polyprotein	6535	6542	8	TVIWDYKR	netmhcpa_el	0.69
866	HLA-A*33:03	orf1ab polyprotein	4514	4524	11	YTMADLVYALR	netmhcpa_el	0.69

867	HLA-A*33:03	orf1ab polyprotein	536	545	10	FASEAARVVR	netmhcpa_el	0.69
868	HLA-A*33:03	orf1ab polyprotein	5910	5919	10	QFTSLEIPRR	netmhcpa_el	0.69
869	HLA-A*02:06	orf1ab polyprotein	680	688	9	KLVNKFLAL	Consensus (ann/smm)	0.68
870	HLA-A*02:06	orf1ab polyprotein	5989	5997	9	YQVNGYPNM	Consensus (ann/smm)	0.68
871	HLA-A*24:02	orf1ab polyprotein	3113	3122	10	TFYLTNDVSF	Consensus (ann/smm)	0.68
872	HLA-A*26:01	orf1ab polyprotein	4259	4267	9	EVPANSTVL	Consensus (ann/smm)	0.68
873	HLA-A*26:01	orf1ab polyprotein	88	97	10	LVAELEGIQY	Consensus (ann/smm)	0.68
874	HLA-A*26:01	orf1ab polyprotein	4648	4657	10	HVDTDLTKPY	Consensus (ann/smm)	0.68
875	HLA-A*31:01	orf1ab polyprotein	5470	5479	10	KLSYGIATVR	Consensus (ann/smm)	0.68
876	HLA-A*31:01	orf1ab polyprotein	5035	5043	9	TTCCSLSHR	Consensus (ann/smm)	0.68
877	HLA-A*33:03	orf1ab polyprotein	1189	1197	9	SFLEMKSEK	netmhcpa_el	0.68
878	HLA-A*33:03	orf1ab polyprotein	6308	6316	9	LFWNCNVDR	netmhcpa_el	0.68
879	HLA-A*01:01	orf1ab polyprotein	6419	6427	9	YLDAYNMMI	Consensus (ann/smm)	0.67
880	HLA-A*01:01	orf1ab polyprotein	4004	4013	10	MADQAMTQMY	Consensus (ann/smm)	0.67
881	HLA-A*01:01	orf1ab polyprotein	4839	4848	10	NAAISDYDYY	Consensus (ann/smm)	0.67
882	HLA-A*02:01	orf1ab polyprotein	3917	3925	9	VLLSMQGAV	Consensus (ann/comblib_sidney2008/smm)	0.67
883	HLA-A*02:01	orf1ab polyprotein	2901	2910	10	KLIEYDFAT	Consensus (ann/smm)	0.67
884	HLA-A*02:06	orf1ab polyprotein	3126	3135	10	IQWMVMFTPL	Consensus (ann/smm)	0.67
885	HLA-A*02:06	orf1ab polyprotein	3620	3629	10	AMSAFAMMFV	Consensus (ann/smm)	0.67
886	HLA-A*02:06	orf1ab polyprotein	3753	3761	9	FLARGIVFM	Consensus (ann/smm)	0.67
887	HLA-A*02:06	orf1ab polyprotein	2243	2252	10	LIYSTAALGV	Consensus (ann/smm)	0.67
888	HLA-A*03:01	orf1ab polyprotein	3103	3111	9	GVYSVIYLY	Consensus (ann/smm)	0.67
889	HLA-A*03:01	orf1ab polyprotein	1295	1304	10	VLTAVVIPTK	Consensus (ann/smm)	0.67
890	HLA-A*11:01	orf1ab polyprotein	1808	1817	10	SAPPAQYELK	Consensus (ann/smm)	0.67
891	HLA-A*11:01	orf1ab polyprotein	2821	2830	10	ASTDTCFANK	Consensus (ann/smm)	0.67
892	HLA-A*24:02	orf1ab polyprotein	2826	2834	9	CFANKHADP	Consensus (ann/smm)	0.67
893	HLA-A*24:02	orf1ab polyprotein	2953	2961	9	RYVLMGDSI	Consensus (ann/smm)	0.67
894	HLA-A*24:02	orf1ab polyprotein	5905	5914	10	LYDKLQFTSL	Consensus (ann/smm)	0.67
895	HLA-A*26:01	orf1ab polyprotein	3906	3914	9	EAFEKMVSL	Consensus (ann/smm)	0.67

896	HLA-A*26:01	orf1ab polyprotein	1384	1392	9	ETRKLMPVC	Consensus (ann/smm)	0.67
897	HLA-A*26:01	orf1ab polyprotein	4667	4675	9	FTEERLKLF	Consensus (ann/smm)	0.67
898	HLA-A*31:01	orf1ab polyprotein	6625	6633	9	KTQFNYYKK	Consensus (ann/smm)	0.67
899	HLA-A*33:03	orf1ab polyprotein	2507	2515	9	KAGQKTYER	netmhcpa_el	0.67
900	HLA-A*01:01	orf1ab polyprotein	6776	6784	9	YTEISFMLW	Consensus (ann/smm)	0.66
901	HLA-A*02:06	orf1ab polyprotein	612	620	9	WLTNIFGTV	Consensus (ann/smm)	0.66
902	HLA-A*02:06	orf1ab polyprotein	3587	3595	9	ILTSLLVLV	Consensus (ann/smm)	0.66
903	HLA-A*03:01	orf1ab polyprotein	5977	5986	10	RRLISMMGFK	Consensus (ann/smm)	0.66
904	HLA-A*11:01	orf1ab polyprotein	2020	2029	10	ETSNSFDVLK	Consensus (ann/smm)	0.66
905	HLA-A*11:01	orf1ab polyprotein	4733	4741	9	VVSTGYHFR	Consensus (ann/smm)	0.66
906	HLA-A*11:01	orf1ab polyprotein	283	291	9	TIQPRVEKK	Consensus (ann/smm)	0.66
907	HLA-A*11:01	orf1ab polyprotein	411	419	9	FSYVGCHNK	Consensus (ann/smm)	0.66
908	HLA-A*24:02	orf1ab polyprotein	422	431	10	YWVPRASANI	Consensus (ann/smm)	0.66
909	HLA-A*24:02	orf1ab polyprotein	3153	3161	9	FYWFFSNYL	Consensus (ann/smm)	0.66
910	HLA-A*26:01	orf1ab polyprotein	220	229	10	DFIDTKRGVY	Consensus (ann/smm)	0.66
911	HLA-A*26:01	orf1ab polyprotein	6942	6950	9	DSKEGFFTY	Consensus (ann/smm)	0.66
912	HLA-A*31:01	orf1ab polyprotein	5471	5479	9	LSYGIATVR	Consensus (ann/smm)	0.66
913	HLA-A*33:03	orf1ab polyprotein	6443	6450	8	NLWNTFTR	netmhcpa_el	0.66
914	HLA-A*01:01	orf1ab polyprotein	2552	2560	9	SSAKSASVY	Consensus (ann/smm)	0.65
915	HLA-A*02:01	orf1ab polyprotein	5982	5991	10	MMGFKMNYQV	Consensus (ann/smm)	0.65
916	HLA-A*02:06	orf1ab polyprotein	2348	2356	9	QLFFSYFAV	Consensus (ann/smm)	0.65
917	HLA-A*02:06	orf1ab polyprotein	3488	3496	9	TTLNDFNLV	Consensus (ann/smm)	0.65
918	HLA-A*02:06	orf1ab polyprotein	3838	3847	10	FKLNIKLLGV	Consensus (ann/smm)	0.65
919	HLA-A*02:06	orf1ab polyprotein	331	339	9	WQTGDFVKA	Consensus (ann/smm)	0.65
920	HLA-A*03:01	orf1ab polyprotein	4565	4573	9	RVYANLGER	Consensus (ann/smm)	0.65
921	HLA-A*03:01	orf1ab polyprotein	2405	2414	10	NSSTCMMCYK	Consensus (ann/smm)	0.65
922	HLA-A*03:01	orf1ab polyprotein	5951	5959	9	HLSVDTKFK	Consensus (ann/smm)	0.65
923	HLA-A*03:01	orf1ab polyprotein	5504	5513	10	YVFTGYRVTK	Consensus (ann/smm)	0.65
924	HLA-A*11:01	orf1ab polyprotein	5710	5718	9	VVNARLRAK	Consensus (ann/smm)	0.65

925	HLA-A*11:01	orf1ab polyprotein	6092	6100	9	VQMLSDTLK	Consensus (ann/smm)	0.65
926	HLA-A*11:01	orf1ab polyprotein	728	737	10	GLLMPLKAPK	Consensus (ann/smm)	0.65
927	HLA-A*24:02	orf1ab polyprotein	2098	2107	10	AYVDNSSLTI	Consensus (ann/smm)	0.65
928	HLA-A*24:02	orf1ab polyprotein	3708	3717	10	VWTLMNVLTL	Consensus (ann/smm)	0.65
929	HLA-A*24:02	orf1ab polyprotein	3485	3493	9	RFTTTLNDF	Consensus (ann/smm)	0.65
930	HLA-A*26:01	orf1ab polyprotein	3645	3654	10	ATVAYFNMVY	Consensus (ann/smm)	0.65
931	HLA-A*26:01	orf1ab polyprotein	5539	5548	10	TTYKLNVDY	Consensus (ann/smm)	0.65
932	HLA-A*31:01	orf1ab polyprotein	4488	4497	10	VAKHDFKFR	Consensus (ann/smm)	0.65
933	HLA-A*31:01	orf1ab polyprotein	6308	6316	9	LFWNCNVDR	Consensus (ann/smm)	0.65
934	HLA-A*33:03	orf1ab polyprotein	394	402	9	KTILRKGGR	netmhcpa_el	0.65
935	HLA-A*33:03	orf1ab polyprotein	3797	3805	9	FCLLNRYFR	netmhcpa_el	0.65
936	HLA-A*33:03	orf1ab polyprotein	5823	5831	9	FLTRNPAWR	netmhcpa_el	0.65
937	HLA-A*33:03	orf1ab polyprotein	5993	6001	9	GYPNMFITR	netmhcpa_el	0.65
938	HLA-A*33:03	orf1ab polyprotein	6478	6486	9	IINNTVYTK	netmhcpa_el	0.65
939	HLA-A*33:03	orf1ab polyprotein	6508	6516	9	ELWAKRNIK	netmhcpa_el	0.65
940	HLA-A*33:03	orf1ab polyprotein	5219	5228	10	VYLPYPDPSR	netmhcpa_el	0.65
941	HLA-A*01:01	orf1ab polyprotein	6853	6861	9	NTLTAVPY	Consensus (ann/smm)	0.64
942	HLA-A*01:01	orf1ab polyprotein	915	925	11	KLASHMYCSFY	Consensus (ann/smm)	0.64
943	HLA-A*01:01	orf1ab polyprotein	5539	5548	10	TTYKLNVDY	Consensus (ann/smm)	0.64
944	HLA-A*01:01	orf1ab polyprotein	2236	2245	10	LSVCLGSLIY	Consensus (ann/smm)	0.64
945	HLA-A*02:06	orf1ab polyprotein	3614	3623	10	FAMGIIAMSA	Consensus (ann/smm)	0.64
946	HLA-A*03:01	orf1ab polyprotein	2307	2315	9	IQITISSFK	Consensus (ann/smm)	0.64
947	HLA-A*03:01	orf1ab polyprotein	5024	5032	9	IMASLVLAR	Consensus (ann/smm)	0.64
948	HLA-A*03:01	orf1ab polyprotein	5453	5463	11	RLKLFAAETLK	Consensus (ann/smm)	0.64
949	HLA-A*03:01	orf1ab polyprotein	3779	3788	10	IMLVYCFLGY	Consensus (ann/smm)	0.64
950	HLA-A*03:01	orf1ab polyprotein	4481	4490	10	LLKDCPAVAK	Consensus (ann/smm)	0.64
951	HLA-A*11:01	orf1ab polyprotein	490	500	11	TVKGLDYKAFK	Consensus (ann/smm)	0.64
952	HLA-A*11:01	orf1ab polyprotein	2163	2171	9	RVCTNYMPY	Consensus (ann/smm)	0.64
953	HLA-A*11:01	orf1ab polyprotein	591	600	10	ATNNLVVMAY	Consensus (ann/smm)	0.64

954	HLA-A*11:01	orf1ab polyprotein	1646	1654	9	YMSALNHTK	Consensus (ann/smm)	0.64
955	HLA-A*11:01	orf1ab polyprotein	2407	2415	9	STCMMCYKR	Consensus (ann/smm)	0.64
956	HLA-A*11:01	orf1ab polyprotein	6602	6610	9	GLQPSVGPK	Consensus (ann/smm)	0.64
957	HLA-A*24:02	orf1ab polyprotein	1733	1741	9	SYLFQHANL	Consensus (ann/smm)	0.64
958	HLA-A*26:01	orf1ab polyprotein	2937	2945	9	NVLEGSVAY	Consensus (ann/smm)	0.64
959	HLA-A*26:01	orf1ab polyprotein	4657	4665	9	YIKWDLKY	Consensus (ann/smm)	0.64
960	HLA-A*31:01	orf1ab polyprotein	2327	2336	10	WFLAYILFTR	Consensus (ann/smm)	0.64
961	HLA-A*33:03	orf1ab polyprotein	218	226	9	QLDFIDTKR	netmhcpa_el	0.64
962	HLA-A*33:03	orf1ab polyprotein	2749	2757	9	QVVNVVTTK	netmhcpa_el	0.64
963	HLA-A*33:03	orf1ab polyprotein	6123	6130	8	FVKIGPER	netmhcpa_el	0.64
964	HLA-A*33:03	orf1ab polyprotein	1210	1219	10	EVKPFITESK	netmhcpa_el	0.64
965	HLA-A*33:03	orf1ab polyprotein	6121	6130	10	KYFVKIGPER	netmhcpa_el	0.64
966	HLA-A*01:01	orf1ab polyprotein	4601	4609	9	NQDLNGNWY	Consensus (ann/smm)	0.63
967	HLA-A*01:01	orf1ab polyprotein	2888	2897	10	VFSAVGNICY	Consensus (ann/smm)	0.63
968	HLA-A*01:01	orf1ab polyprotein	3464	3472	9	TVNVLAWLY	Consensus (ann/smm)	0.63
969	HLA-A*01:01	orf1ab polyprotein	5297	5307	11	VMLTNDNTSRY	Consensus (ann/smm)	0.63
970	HLA-A*01:01	orf1ab polyprotein	3463	3472	10	ITVNVLAWLY	Consensus (ann/smm)	0.63
971	HLA-A*02:01	orf1ab polyprotein	6160	6169	10	YVYNPFMIDV	Consensus (ann/smm)	0.63
972	HLA-A*02:01	orf1ab polyprotein	2383	2393	11	MYIFFASFYYV	Consensus (ann/smm)	0.63
973	HLA-A*02:01	orf1ab polyprotein	5701	5710	10	SMATNYDLSV	Consensus (ann/smm)	0.63
974	HLA-A*02:06	orf1ab polyprotein	5213	5221	9	KQGDDYVYL	Consensus (ann/smm)	0.63
975	HLA-A*02:06	orf1ab polyprotein	6426	6435	10	MISAGFSLWV	Consensus (ann/smm)	0.63
976	HLA-A*02:06	orf1ab polyprotein	313	321	9	NQMCLSTLM	Consensus (ann/smm)	0.63
977	HLA-A*02:06	orf1ab polyprotein	1675	1683	9	YLATALLTL	Consensus (ann/smm)	0.63
978	HLA-A*03:01	orf1ab polyprotein	3710	3720	11	TLMNVLTLYK	Consensus (ann/smm)	0.63
979	HLA-A*03:01	orf1ab polyprotein	1090	1098	9	YIATNGPLK	Consensus (ann/smm)	0.63
980	HLA-A*03:01	orf1ab polyprotein	4957	4966	10	TMTNRQFHQK	Consensus (ann/smm)	0.63
981	HLA-A*11:01	orf1ab polyprotein	1519	1529	11	QSTQLGIEFLK	Consensus (ann/smm)	0.63
982	HLA-A*11:01	orf1ab polyprotein	6759	6768	10	KSQDLSVSK	Consensus (ann/smm)	0.63

983	HLA-A*31:01	orf1ab polyprotein	4515	4524	10	TMADLVYALR	Consensus (ann/smm)	0.63
984	HLA-A*31:01	orf1ab polyprotein	7022	7030	9	MHANYIFWR	Consensus (ann/smm)	0.63
985	HLA-A*31:01	orf1ab polyprotein	1694	1703	10	ALQDAYRRAR	Consensus (ann/smm)	0.63
986	HLA-A*33:03	orf1ab polyprotein	1738	1746	9	HANLDSCKR	netmhcpa_el	0.63
987	HLA-A*01:01	orf1ab polyprotein	1768	1776	9	VMYMGTLSY	Consensus (ann/smm)	0.62
988	HLA-A*01:01	orf1ab polyprotein	612	621	10	WLTNIFGTVY	Consensus (ann/smm)	0.62
989	HLA-A*01:01	orf1ab polyprotein	790	799	10	LLEIKDTEKY	Consensus (ann/smm)	0.62
990	HLA-A*02:06	orf1ab polyprotein	5059	5067	9	VMCGGSLYV	Consensus (ann/smm)	0.62
991	HLA-A*03:01	orf1ab polyprotein	829	837	9	TVIEVQGYK	Consensus (ann/smm)	0.62
992	HLA-A*03:01	orf1ab polyprotein	5533	5541	9	VVYRGTTY	Consensus (ann/smm)	0.62
993	HLA-A*03:01	orf1ab polyprotein	1646	1655	10	YMSALNHTKK	Consensus (ann/smm)	0.62
994	HLA-A*11:01	orf1ab polyprotein	5025	5033	9	MASLVLARK	Consensus (ann/smm)	0.62
995	HLA-A*26:01	orf1ab polyprotein	2782	2790	9	FVAEIFYLI	Consensus (ann/smm)	0.62
996	HLA-A*33:03	orf1ab polyprotein	2152	2159	8	TTTNIVTR	netmhcpa_el	0.62
997	HLA-A*33:03	orf1ab polyprotein	3155	3164	10	WFFSNYLKRR	netmhcpa_el	0.62
998	HLA-A*33:03	orf1ab polyprotein	5969	5978	10	GIPKDMTYRR	netmhcpa_el	0.62
999	HLA-A*33:03	orf1ab polyprotein	6051	6060	10	DTPNNTDFSR	netmhcpa_el	0.62
1000	HLA-A*01:01	orf1ab polyprotein	1669	1677	9	WADNNCYLA	Consensus (ann/smm)	0.61
1001	HLA-A*01:01	orf1ab polyprotein	591	600	10	ATNNLVVMAY	Consensus (ann/smm)	0.61
1002	HLA-A*01:01	orf1ab polyprotein	2272	2281	10	NSTNVTIATY	Consensus (ann/smm)	0.61
1003	HLA-A*01:01	orf1ab polyprotein	2668	2677	10	DSCNNYMLTY	Consensus (ann/smm)	0.61
1004	HLA-A*01:01	orf1ab polyprotein	4929	4938	10	PTITQMNLKY	Consensus (ann/smm)	0.61
1005	HLA-A*02:01	orf1ab polyprotein	3424	3434	11	YMHHMELPTGV	Consensus (ann/smm)	0.61
1006	HLA-A*02:06	orf1ab polyprotein	6715	6723	9	FELEDIPM	Consensus (ann/smm)	0.61
1007	HLA-A*02:06	orf1ab polyprotein	1796	1805	10	YLVQQESPFV	Consensus (ann/smm)	0.61
1008	HLA-A*02:06	orf1ab polyprotein	4724	4733	10	KIFVDGVPFV	Consensus (ann/smm)	0.61
1009	HLA-A*02:06	orf1ab polyprotein	5470	5478	9	KLSYGIATV	Consensus (ann/smm)	0.61
1010	HLA-A*03:01	orf1ab polyprotein	2599	2608	10	SSTFNVPMEK	Consensus (ann/smm)	0.61
1011	HLA-A*11:01	orf1ab polyprotein	6385	6394	10	VSDIDYVPLK	Consensus (ann/smm)	0.61

1012	HLA-A*11:01	orf1ab polyprotein	1185	1194	10	KLVSSFLEMK	Consensus (ann/smm)	0.61
1013	HLA-A*11:01	orf1ab polyprotein	5899	5908	10	IMSDRDLYDK	Consensus (ann/smm)	0.61
1014	HLA-A*24:02	orf1ab polyprotein	2590	2598	9	MFDAYVNTF	Consensus (ann/smm)	0.61
1015	HLA-A*24:02	orf1ab polyprotein	3802	3810	9	RYFRLTLGV	Consensus (ann/smm)	0.61
1016	HLA-A*24:02	orf1ab polyprotein	6078	6086	9	MYKGLPWNV	Consensus (ann/smm)	0.61
1017	HLA-A*24:02	orf1ab polyprotein	7027	7035	9	IFWRNTNPI	Consensus (ann/smm)	0.61
1018	HLA-A*24:02	orf1ab polyprotein	3759	3769	11	VFMCVEYCPHF	Consensus (ann/smm)	0.61
1019	HLA-A*26:01	orf1ab polyprotein	5569	5577	9	HYVRITGLY	Consensus (ann/smm)	0.61
1020	HLA-A*26:01	orf1ab polyprotein	2322	2331	10	GLVAEWFLAY	Consensus (ann/smm)	0.61
1021	HLA-A*31:01	orf1ab polyprotein	2411	2420	10	MCKYRNRATR	Consensus (ann/smm)	0.61
1022	HLA-A*31:01	orf1ab polyprotein	5110	5118	9	KYVRNLQHR	Consensus (ann/smm)	0.61
1023	HLA-A*31:01	orf1ab polyprotein	6441	6450	10	TYNLWNTFTR	Consensus (ann/smm)	0.61
1024	HLA-A*33:03	orf1ab polyprotein	1549	1557	9	EVITFDNLK	netmhcpa_el	0.61
1025	HLA-A*33:03	orf1ab polyprotein	5025	5033	9	MASLVLARK	netmhcpa_el	0.61
1026	HLA-A*33:03	orf1ab polyprotein	6514	6522	9	NIKPVPEVK	netmhcpa_el	0.61
1027	HLA-A*33:03	orf1ab polyprotein	4501	4508	8	DMVPHISR	netmhcpa_el	0.61
1028	HLA-A*33:03	orf1ab polyprotein	4229	4239	11	YFIKGLNLLNR	netmhcpa_el	0.61
1029	HLA-A*33:03	orf1ab polyprotein	5504	5513	10	YVFTGYRVTK	netmhcpa_el	0.61
1030	HLA-A*01:01	orf1ab polyprotein	3814	3822	9	LVSTQEFRY	Consensus (ann/smm)	0.6
1031	HLA-A*01:01	orf1ab polyprotein	145	154	10	LGDELGTDPY	Consensus (ann/smm)	0.6
1032	HLA-A*02:01	orf1ab polyprotein	702	710	9	ALNLGETFV	Consensus (ann/comblib_sidney2008/smm)	0.6
1033	HLA-A*02:01	orf1ab polyprotein	1642	1650	9	FLGRYMSAL	Consensus (ann/comblib_sidney2008/smm)	0.6
1034	HLA-A*02:01	orf1ab polyprotein	3109	3117	9	YLYLTFYLT	Consensus (ann/comblib_sidney2008/smm)	0.6
1035	HLA-A*02:01	orf1ab polyprotein	3403	3411	9	FLNGSCGSV	Consensus (ann/comblib_sidney2008/smm)	0.6
1036	HLA-A*02:01	orf1ab polyprotein	3482	3490	9	FLNRFITTL	Consensus (ann/comblib_sidney2008/smm)	0.6
1037	HLA-A*02:01	orf1ab polyprotein	3598	3606	9	TQWSLFFFL	Consensus (ann/comblib_sidney2008/smm)	0.6
1038	HLA-A*02:01	orf1ab polyprotein	3662	3670	9	RIMTWLDMV	Consensus (ann/comblib_sidney2008/smm)	0.6
1039	HLA-A*02:01	orf1ab polyprotein	4699	4707	9	ILHCANFNV	Consensus (ann/comblib_sidney2008/smm)	0.6
1040	HLA-A*02:01	orf1ab polyprotein	5253	5261	9	SLAIDAYPL	Consensus (ann/comblib_sidney2008/smm)	0.6

1041	HLA-A*02:01	orf1ab polyprotein	6246	6254	9	LLADKFPVL	Consensus (ann/comblib_sidney2008/smm)	0.6
1042	HLA-A*02:01	orf1ab polyprotein	1985	1994	10	LLHKPIVWHV	Consensus (ann/smm)	0.6
1043	HLA-A*03:01	orf1ab polyprotein	1398	1407	10	IVSTIQRKYK	Consensus (ann/smm)	0.6
1044	HLA-A*03:01	orf1ab polyprotein	3142	3151	10	IAYIICISTK	Consensus (ann/smm)	0.6
1045	HLA-A*03:01	orf1ab polyprotein	5792	5801	10	SAQCFKMFYK	Consensus (ann/smm)	0.6
1046	HLA-A*11:01	orf1ab polyprotein	692	701	10	SIIGGAKLK	Consensus (ann/smm)	0.6
1047	HLA-A*11:01	orf1ab polyprotein	7041	7051	11	SLFDMSKFPLK	Consensus (ann/smm)	0.6
1048	HLA-A*11:01	orf1ab polyprotein	313	322	10	NQMCLSTLMK	Consensus (ann/smm)	0.6
1049	HLA-A*11:01	orf1ab polyprotein	2920	2928	9	TIFKDasGK	Consensus (ann/smm)	0.6
1050	HLA-A*24:02	orf1ab polyprotein	2170	2179	10	PYFFTLQL	Consensus (ann/smm)	0.6
1051	HLA-A*24:02	orf1ab polyprotein	3602	3611	10	LFFFLYENAF	Consensus (ann/smm)	0.6
1052	HLA-A*24:02	orf1ab polyprotein	3787	3796	10	GYFCTCYFGL	Consensus (ann/smm)	0.6
1053	HLA-A*24:02	orf1ab polyprotein	6688	6697	10	VYGDFSHSQL	Consensus (ann/smm)	0.6
1054	HLA-A*26:01	orf1ab polyprotein	553	561	9	ETAQNSVRV	Consensus (ann/smm)	0.6
1055	HLA-A*26:01	orf1ab polyprotein	568	576	9	TILDGISQY	Consensus (ann/smm)	0.6
1056	HLA-A*26:01	orf1ab polyprotein	1478	1486	9	SSPDAVTAY	Consensus (ann/smm)	0.6
1057	HLA-A*26:01	orf1ab polyprotein	1022	1031	10	TIEVNSFSGY	Consensus (ann/smm)	0.6
1058	HLA-A*31:01	orf1ab polyprotein	1396	1404	9	KAIVSTIQR	Consensus (ann/smm)	0.6
1059	HLA-A*31:01	orf1ab polyprotein	2408	2417	10	TCMNCYKRNR	Consensus (ann/smm)	0.6
1060	HLA-A*31:01	orf1ab polyprotein	4840	4849	10	AAISDYDYR	Consensus (ann/smm)	0.6
1061	HLA-A*33:03	orf1ab polyprotein	5824	5832	9	LTRNPAWRK	netmhcpa_el	0.6
1062	HLA-A*33:03	orf1ab polyprotein	5503	5510	8	NYVFTGYR	netmhcpa_el	0.6
1063	HLA-A*33:03	orf1ab polyprotein	34	43	10	SVEEVSEAR	netmhcpa_el	0.6
1064	HLA-A*33:03	orf1ab polyprotein	6194	6203	10	VASCDAIMTR	netmhcpa_el	0.6
1065	HLA-A*01:01	orf1ab polyprotein	3774	3783	10	NTLQCIMLVY	Consensus (ann/smm)	0.59
1066	HLA-A*02:01	orf1ab polyprotein	6425	6435	11	MMISAGFSLWV	Consensus (ann/smm)	0.59
1067	HLA-A*02:06	orf1ab polyprotein	2385	2393	9	IFFASFYV	Consensus (ann/smm)	0.59
1068	HLA-A*03:01	orf1ab polyprotein	2217	2225	9	YLKSPNFSK	Consensus (ann/smm)	0.59
1069	HLA-A*03:01	orf1ab polyprotein	38	47	10	VLSEARQHLK	Consensus (ann/smm)	0.59

1070	HLA-A*03:01	orf1ab polyprotein	119	129	11	RKVLLRKNGNK	Consensus (ann/smm)	0.59
1071	HLA-A*11:01	orf1ab polyprotein	2913	2923	11	CVLAAECTIFK	Consensus (ann/smm)	0.59
1072	HLA-A*11:01	orf1ab polyprotein	1103	1112	10	CVLSGHNLAK	Consensus (ann/smm)	0.59
1073	HLA-A*11:01	orf1ab polyprotein	4671	4680	10	RLKLFDRYFK	Consensus (ann/smm)	0.59
1074	HLA-A*24:02	orf1ab polyprotein	2381	2390	10	VRMYIFFASF	Consensus (ann/smm)	0.59
1075	HLA-A*26:01	orf1ab polyprotein	2551	2560	10	ESSAKSASVY	Consensus (ann/smm)	0.59
1076	HLA-A*33:03	orf1ab polyprotein	2503	2511	9	LYFDKAGQK	netmhcpa_el	0.59
1077	HLA-A*33:03	orf1ab polyprotein	4673	4681	9	KLFDYFYK	netmhcpa_el	0.59
1078	HLA-A*02:01	orf1ab polyprotein	3107	3116	10	VIYLYLTFYL	Consensus (ann/smm)	0.58
1079	HLA-A*02:06	orf1ab polyprotein	651	660	10	FISTACEIV	Consensus (ann/smm)	0.58
1080	HLA-A*03:01	orf1ab polyprotein	1874	1883	10	TTTIKPVYK	Consensus (ann/smm)	0.58
1081	HLA-A*11:01	orf1ab polyprotein	1270	1280	11	LVSDIDITFLK	Consensus (ann/smm)	0.58
1082	HLA-A*11:01	orf1ab polyprotein	3	11	9	SLVPGFNEK	Consensus (ann/smm)	0.58
1083	HLA-A*11:01	orf1ab polyprotein	6293	6301	9	YSYATHSDK	Consensus (ann/smm)	0.58
1084	HLA-A*11:01	orf1ab polyprotein	5274	5282	9	HLYLQYIRK	Consensus (ann/smm)	0.58
1085	HLA-A*24:02	orf1ab polyprotein	3077	3085	9	VVAFNTLLF	Consensus (ann/smm)	0.58
1086	HLA-A*24:02	orf1ab polyprotein	5268	5277	10	EYADVHLYL	Consensus (ann/smm)	0.58
1087	HLA-A*26:01	orf1ab polyprotein	3103	3111	9	GVYSVIYLY	Consensus (ann/smm)	0.58
1088	HLA-A*26:01	orf1ab polyprotein	5467	5475	9	ETFKLSYGI	Consensus (ann/smm)	0.58
1089	HLA-A*26:01	orf1ab polyprotein	647	655	9	EIVKFISTC	Consensus (ann/smm)	0.58
1090	HLA-A*26:01	orf1ab polyprotein	6193	6201	9	HVASCDAIM	Consensus (ann/smm)	0.58
1091	HLA-A*26:01	orf1ab polyprotein	5974	5983	10	MTYRRLISMM	Consensus (ann/smm)	0.58
1092	HLA-A*33:03	orf1ab polyprotein	5883	5891	9	NRFNVAITR	netmhcpa_el	0.58
1093	HLA-A*33:03	orf1ab polyprotein	6317	6325	9	YPANSIVCR	netmhcpa_el	0.58
1094	HLA-A*01:01	orf1ab polyprotein	5073	5081	9	SSGDATTAY	Consensus (ann/smm)	0.57
1095	HLA-A*01:01	orf1ab polyprotein	5286	5295	10	ELTGHMLDMY	Consensus (ann/smm)	0.57
1096	HLA-A*02:01	orf1ab polyprotein	3582	3591	10	WLLLILTSL	Consensus (ann/smm)	0.57
1097	HLA-A*02:06	orf1ab polyprotein	6244	6253	10	AALLADKFPV	Consensus (ann/smm)	0.57
1098	HLA-A*03:01	orf1ab polyprotein	710	719	10	VTSHKGLYRK	Consensus (ann/smm)	0.57

1099	HLA-A*03:01	orf1ab polyprotein	2789	2798	10	LITPVHVMSK	Consensus (ann/smm)	0.57
1100	HLA-A*11:01	orf1ab polyprotein	1296	1304	9	LTAVVIPTK	Consensus (ann/smm)	0.57
1101	HLA-A*11:01	orf1ab polyprotein	675	684	10	VQTFKLVNK	Consensus (ann/smm)	0.57
1102	HLA-A*11:01	orf1ab polyprotein	4841	4849	9	AISDYDYR	Consensus (ann/smm)	0.57
1103	HLA-A*24:02	orf1ab polyprotein	6860	6868	9	PYNMRVIHF	Consensus (ann/smm)	0.57
1104	HLA-A*24:02	orf1ab polyprotein	3595	3603	9	VQSTQWSLF	Consensus (ann/smm)	0.57
1105	HLA-A*24:02	orf1ab polyprotein	3811	3820	10	YDYLVTQEF	Consensus (ann/smm)	0.57
1106	HLA-A*24:02	orf1ab polyprotein	4629	4639	11	YSSLMPILTL	Consensus (ann/smm)	0.57
1107	HLA-A*26:01	orf1ab polyprotein	4371	4379	9	TVCGMWKGY	Consensus (ann/smm)	0.57
1108	HLA-A*33:03	orf1ab polyprotein	4416	4425	10	TGTSTDVVYR	netmhcpa_el	0.57
1109	HLA-A*01:01	orf1ab polyprotein	1415	1423	9	VVDYGARFY	Consensus (ann/smm)	0.56
1110	HLA-A*01:01	orf1ab polyprotein	3715	3723	9	LTLVYKVVY	Consensus (ann/smm)	0.56
1111	HLA-A*01:01	orf1ab polyprotein	5435	5444	10	TCDWTNAGDY	Consensus (ann/smm)	0.56
1112	HLA-A*01:01	orf1ab polyprotein	2483	2491	9	PTDQSSYIV	Consensus (ann/smm)	0.56
1113	HLA-A*02:01	orf1ab polyprotein	3111	3120	10	YLTFYLTNDV	Consensus (ann/smm)	0.56
1114	HLA-A*02:06	orf1ab polyprotein	4479	4488	10	YNLLKDCPAV	Consensus (ann/smm)	0.56
1115	HLA-A*02:06	orf1ab polyprotein	1984	1994	11	KLLHKPIVWHV	Consensus (ann/smm)	0.56
1116	HLA-A*03:01	orf1ab polyprotein	1649	1657	9	ALNHTKKWK	Consensus (ann/smm)	0.56
1117	HLA-A*03:01	orf1ab polyprotein	2753	2761	9	VVTTKIALK	Consensus (ann/smm)	0.56
1118	HLA-A*03:01	orf1ab polyprotein	2790	2798	9	ITPVHVMSK	Consensus (ann/smm)	0.56
1119	HLA-A*03:01	orf1ab polyprotein	3620	3630	11	AMSAFAMMFVK	Consensus (ann/smm)	0.56
1120	HLA-A*11:01	orf1ab polyprotein	484	492	9	TSAFVETVK	Consensus (ann/smm)	0.56
1121	HLA-A*11:01	orf1ab polyprotein	2753	2761	9	VVTTKIALK	Consensus (ann/smm)	0.56
1122	HLA-A*11:01	orf1ab polyprotein	4673	4680	8	KLFDYFK	Consensus (ann/smm)	0.56
1123	HLA-A*11:01	orf1ab polyprotein	2344	2353	10	AAIMQLFFSY	Consensus (ann/smm)	0.56
1124	HLA-A*24:02	orf1ab polyprotein	2244	2253	10	IYSTAALGVL	Consensus (ann/smm)	0.56
1125	HLA-A*24:02	orf1ab polyprotein	3149	3157	9	STKHFWFF	Consensus (ann/smm)	0.56
1126	HLA-A*24:02	orf1ab polyprotein	4847	4855	9	YYRYNLPTM	Consensus (ann/smm)	0.56
1127	HLA-A*24:02	orf1ab polyprotein	6107	6115	9	VFVLWAHGF	Consensus (ann/smm)	0.56

1128	HLA-A*26:01	orf1ab polyprotein	3304	3312	9	HVICTSEDM	Consensus (ann/smm)	0.56
1129	HLA-A*26:01	orf1ab polyprotein	4476	4484	9	ETIYNLLKD	Consensus (ann/smm)	0.56
1130	HLA-A*26:01	orf1ab polyprotein	1767	1776	10	AVMYMGTLISY	Consensus (ann/smm)	0.56
1131	HLA-A*26:01	orf1ab polyprotein	2136	2145	10	DTIANYAKPF	Consensus (ann/smm)	0.56
1132	HLA-A*26:01	orf1ab polyprotein	4559	4567	9	ENPDILRVY	Consensus (ann/smm)	0.56
1133	HLA-A*26:01	orf1ab polyprotein	3135	3144	10	LVPFWITIAY	Consensus (ann/smm)	0.56
1134	HLA-A*31:01	orf1ab polyprotein	6316	6325	10	RYPANSIVCR	Consensus (ann/smm)	0.56
1135	HLA-A*31:01	orf1ab polyprotein	116	124	9	VAYRKVLLR	Consensus (ann/smm)	0.56
1136	HLA-A*33:03	orf1ab polyprotein	5981	5989	9	SMMGFKMNY	netmhcpa_el	0.56
1137	HLA-A*33:03	orf1ab polyprotein	4143	4150	8	ELSPVALR	netmhcpa_el	0.56
1138	HLA-A*33:03	orf1ab polyprotein	3217	3227	11	FSGAMDTTSYR	netmhcpa_el	0.56
1139	HLA-A*01:01	orf1ab polyprotein	5303	5313	11	NTSRYWEPEFY	Consensus (ann/smm)	0.55
1140	HLA-A*01:01	orf1ab polyprotein	4648	4657	10	HVDTDLTKPY	Consensus (ann/smm)	0.55
1141	HLA-A*01:01	orf1ab polyprotein	5214	5223	10	QGDDYVYLPY	Consensus (ann/smm)	0.55
1142	HLA-A*01:01	orf1ab polyprotein	6427	6436	10	ISAGFSLWVY	Consensus (ann/smm)	0.55
1143	HLA-A*02:01	orf1ab polyprotein	6424	6433	10	NMMISAGFSL	Consensus (ann/smm)	0.55
1144	HLA-A*02:06	orf1ab polyprotein	6101	6109	9	NLSDRVVFV	Consensus (ann/smm)	0.55
1145	HLA-A*03:01	orf1ab polyprotein	1806	1814	9	MMSAPPAQY	Consensus (ann/smm)	0.55
1146	HLA-A*03:01	orf1ab polyprotein	5255	5263	9	AIDAYPLTK	Consensus (ann/smm)	0.55
1147	HLA-A*03:01	orf1ab polyprotein	6478	6486	9	IINNTVYTK	Consensus (ann/smm)	0.55
1148	HLA-A*11:01	orf1ab polyprotein	3710	3720	11	TLMNVLTLVYK	Consensus (ann/smm)	0.55
1149	HLA-A*11:01	orf1ab polyprotein	1503	1512	10	ETISLAGSYK	Consensus (ann/smm)	0.55
1150	HLA-A*11:01	orf1ab polyprotein	4800	4809	10	QTVKPGNFNK	Consensus (ann/smm)	0.55
1151	HLA-A*11:01	orf1ab polyprotein	1172	1180	9	NVYLAVFDK	Consensus (ann/smm)	0.55
1152	HLA-A*11:01	orf1ab polyprotein	4434	4442	9	VAGFAKFLK	Consensus (ann/smm)	0.55
1153	HLA-A*26:01	orf1ab polyprotein	3780	3788	9	MLVYCFLGY	Consensus (ann/smm)	0.55
1154	HLA-A*26:01	orf1ab polyprotein	5140	5148	9	YLRKHFSMM	Consensus (ann/smm)	0.55
1155	HLA-A*26:01	orf1ab polyprotein	7001	7009	9	EAFLLGCNY	Consensus (ann/smm)	0.55
1156	HLA-A*26:01	orf1ab polyprotein	1827	1836	10	YTGNYQCGHY	Consensus (ann/smm)	0.55

1157	HLA-A*31:01	orf1ab polyprotein	1557	1566	10	KTLLSLREVR	Consensus (ann/smm)	0.55
1158	HLA-A*33:03	orf1ab polyprotein	5035	5043	9	TCCCLSHR	netmhcpa_el	0.55
1159	HLA-A*33:03	orf1ab polyprotein	1619	1628	10	YVLPNDTLR	netmhcpa_el	0.55
1160	HLA-A*33:03	orf1ab polyprotein	2216	2225	10	NYLKSPNFSK	netmhcpa_el	0.55
1161	HLA-A*33:03	orf1ab polyprotein	3552	3561	10	DEFTPFDVVR	netmhcpa_el	0.55
1162	HLA-A*33:03	orf1ab polyprotein	5527	5536	10	GDYGDVVYR	netmhcpa_el	0.55
1163	HLA-A*02:06	orf1ab polyprotein	4266	4274	9	VLSFAFAV	Consensus (ann/smm)	0.54
1164	HLA-A*03:01	orf1ab polyprotein	1773	1781	9	TLSYEQFKK	Consensus (ann/smm)	0.54
1165	HLA-A*03:01	orf1ab polyprotein	5793	5801	9	AQCFKMFYK	Consensus (ann/smm)	0.54
1166	HLA-A*03:01	orf1ab polyprotein	5023	5032	10	RIMASLVLAR	Consensus (ann/smm)	0.54
1167	HLA-A*11:01	orf1ab polyprotein	5964	5972	9	CVDIPGIPK	Consensus (ann/smm)	0.54
1168	HLA-A*24:02	orf1ab polyprotein	135	143	9	SYGADLKSF	Consensus (ann/smm)	0.54
1169	HLA-A*26:01	orf1ab polyprotein	3129	3138	10	MVMFTPLVPF	Consensus (ann/smm)	0.54
1170	HLA-A*31:01	orf1ab polyprotein	4030	4038	9	QTMLFTMLR	Consensus (ann/smm)	0.54
1171	HLA-A*31:01	orf1ab polyprotein	3062	3069	8	YYFMRFR	ann	0.54
1172	HLA-A*33:03	orf1ab polyprotein	6504	6512	9	NVAFELWAK	netmhcpa_el	0.54
1173	HLA-A*33:03	orf1ab polyprotein	3698	3707	10	RTVYDDGARR	netmhcpa_el	0.54
1174	HLA-A*33:03	orf1ab polyprotein	5488	5497	10	HLSWEVGKPR	netmhcpa_el	0.54
1175	HLA-A*01:01	orf1ab polyprotein	916	925	10	LASHMYCSFY	Consensus (ann/smm)	0.53
1176	HLA-A*01:01	orf1ab polyprotein	5304	5313	10	TSRYWEPEFY	Consensus (ann/smm)	0.53
1177	HLA-A*02:01	orf1ab polyprotein	5245	5254	10	TLMIERFVSL	Consensus (ann/smm)	0.53
1178	HLA-A*02:01	orf1ab polyprotein	2332	2341	10	ILFTRFFVVL	Consensus (ann/smm)	0.53
1179	HLA-A*03:01	orf1ab polyprotein	6960	6968	9	ALGGSVAIK	Consensus (ann/smm)	0.53
1180	HLA-A*03:01	orf1ab polyprotein	5166	5175	10	GLVASIKNFK	Consensus (ann/smm)	0.53
1181	HLA-A*11:01	orf1ab polyprotein	2802	2810	9	FSSEIIGYK	Consensus (ann/smm)	0.53
1182	HLA-A*11:01	orf1ab polyprotein	5776	5784	9	VSALVYDNK	Consensus (ann/smm)	0.53
1183	HLA-A*11:01	orf1ab polyprotein	3219	3227	9	GAMDTTSYR	Consensus (ann/smm)	0.53
1184	HLA-A*24:02	orf1ab polyprotein	1417	1424	8	DYGARFYF	Consensus (ann/smm)	0.53
1185	HLA-A*24:02	orf1ab polyprotein	5137	5145	9	FYAYLRKHF	Consensus (ann/smm)	0.53

1186	HLA-A*24:02	orf1ab polyprotein	5394	5403	10	YYCKSHKPPI	Consensus (ann/smm)	0.53
1187	HLA-A*24:02	orf1ab polyprotein	5721	5729	9	VYIGDPAQL	Consensus (ann/smm)	0.53
1188	HLA-A*24:02	orf1ab polyprotein	1536	1545	10	YYTSNPTTFH	Consensus (ann/smm)	0.53
1189	HLA-A*26:01	orf1ab polyprotein	2305	2313	9	ETIQITISS	Consensus (ann/smm)	0.53
1190	HLA-A*26:01	orf1ab polyprotein	6623	6631	9	AVKTQFNYY	Consensus (ann/smm)	0.53
1191	HLA-A*31:01	orf1ab polyprotein	4966	4975	10	KLLKSIATR	Consensus (ann/smm)	0.53
1192	HLA-A*31:01	orf1ab polyprotein	7077	7085	9	RLIIRENNR	Consensus (ann/smm)	0.53
1193	HLA-A*33:03	orf1ab polyprotein	3198	3206	9	LLPLTQYNR	netmhcpa_el	0.53
1194	HLA-A*33:03	orf1ab polyprotein	278	287	10	NSIIKTIQPR	netmhcpa_el	0.53
1195	HLA-A*01:01	orf1ab polyprotein	2273	2281	9	STNVTIATY	Consensus (ann/smm)	0.52
1196	HLA-A*01:01	orf1ab polyprotein	1821	1831	11	FTCASEYTGNY	Consensus (ann/smm)	0.52
1197	HLA-A*02:01	orf1ab polyprotein	3192	3201	10	KLRSDVLLPL	Consensus (ann/smm)	0.52
1198	HLA-A*02:01	orf1ab polyprotein	3639	3648	10	FLLPSLATVA	Consensus (ann/smm)	0.52
1199	HLA-A*02:06	orf1ab polyprotein	1214	1222	9	FITESKPSV	Consensus (ann/smm)	0.52
1200	HLA-A*02:06	orf1ab polyprotein	6659	6667	9	SQMEIDFLE	Consensus (ann/smm)	0.52
1201	HLA-A*03:01	orf1ab polyprotein	3669	3678	10	MVDTSLSGFK	Consensus (ann/smm)	0.52
1202	HLA-A*03:01	orf1ab polyprotein	4442	4451	10	KTNCCRFQEK	Consensus (ann/smm)	0.52
1203	HLA-A*03:01	orf1ab polyprotein	1311	1319	9	EMLAKALRK	Consensus (ann/smm)	0.52
1204	HLA-A*03:01	orf1ab polyprotein	2432	2442	11	RSFYVYANGGK	Consensus (ann/smm)	0.52
1205	HLA-A*11:01	orf1ab polyprotein	1660	1668	9	QVNGLTSIK	Consensus (ann/smm)	0.52
1206	HLA-A*11:01	orf1ab polyprotein	2914	2923	10	VLAAECTIFK	Consensus (ann/smm)	0.52
1207	HLA-A*11:01	orf1ab polyprotein	3057	3066	10	VTCLAYYFMR	Consensus (ann/smm)	0.52
1208	HLA-A*11:01	orf1ab polyprotein	3184	3192	9	LLNKEMYLK	Consensus (ann/smm)	0.52
1209	HLA-A*24:02	orf1ab polyprotein	2672	2680	9	NYMLTYNKV	Consensus (ann/smm)	0.52
1210	HLA-A*24:02	orf1ab polyprotein	677	685	9	TFFKLVNKF	Consensus (ann/smm)	0.52
1211	HLA-A*24:02	orf1ab polyprotein	5576	5586	11	LYPTLNISDEF	Consensus (ann/smm)	0.52
1212	HLA-A*26:01	orf1ab polyprotein	2594	2602	9	YVNTFSSTF	Consensus (ann/smm)	0.52
1213	HLA-A*26:01	orf1ab polyprotein	3022	3030	9	DAVNLLTNM	Consensus (ann/smm)	0.52
1214	HLA-A*26:01	orf1ab polyprotein	4978	4986	9	TVVIGTSKF	Consensus (ann/smm)	0.52

1215	HLA-A*31:01	orf1ab polyprotein	3004	3012	9	WVLNNDYYR	Consensus (ann/smm)	0.52
1216	HLA-A*01:01	orf1ab polyprotein	4866	4875	10	EVVDKYFDCY	Consensus (ann/smm)	0.51
1217	HLA-A*02:01	orf1ab polyprotein	3605	3614	10	FLYENAFLPF	Consensus (ann/smm)	0.51
1218	HLA-A*02:06	orf1ab polyprotein	2784	2793	10	AAIFYLITPV	Consensus (ann/smm)	0.51
1219	HLA-A*03:01	orf1ab polyprotein	2009	2017	9	CIRCLWSTK	Consensus (ann/smm)	0.51
1220	HLA-A*03:01	orf1ab polyprotein	4224	4232	9	KVKYLYFIK	Consensus (ann/smm)	0.51
1221	HLA-A*11:01	orf1ab polyprotein	1873	1883	11	YTTTIKPVTYK	Consensus (ann/smm)	0.51
1222	HLA-A*24:02	orf1ab polyprotein	3619	3628	10	IAMSAFAMMF	Consensus (ann/smm)	0.51
1223	HLA-A*26:01	orf1ab polyprotein	1727	1736	10	DVRETMSYLF	Consensus (ann/smm)	0.51
1224	HLA-A*31:01	orf1ab polyprotein	6505	6513	9	VAFELWAKR	Consensus (ann/smm)	0.51
1225	HLA-A*31:01	orf1ab polyprotein	6625	6632	8	KTQFNYYK	ann	0.51
1226	HLA-A*33:03	orf1ab polyprotein	808	816	9	VTNNTFTLK	netmhcpa_el	0.51
1227	HLA-A*33:03	orf1ab polyprotein	5818	5826	9	GVVREFLTR	netmhcpa_el	0.51
1228	HLA-A*33:03	orf1ab polyprotein	6078	6088	11	MYKGLPWNVVR	netmhcpa_el	0.51
1229	HLA-A*01:01	orf1ab polyprotein	6298	6306	9	HSDKFTDGV	Consensus (ann/smm)	0.5
1230	HLA-A*01:01	orf1ab polyprotein	1477	1486	10	VSSPDAVTAY	Consensus (ann/smm)	0.5
1231	HLA-A*02:01	orf1ab polyprotein	6246	6253	8	LLADKFPV	Consensus (ann/smm)	0.5
1232	HLA-A*02:01	orf1ab polyprotein	84	92	9	VMVELVAEL	Consensus (ann/comblib_sidney2008/smm)	0.5
1233	HLA-A*02:01	orf1ab polyprotein	1148	1156	9	LLSAGIFGA	Consensus (ann/comblib_sidney2008/smm)	0.5
1234	HLA-A*02:01	orf1ab polyprotein	1278	1286	9	FLKKDAPYI	Consensus (ann/comblib_sidney2008/smm)	0.5
1235	HLA-A*02:01	orf1ab polyprotein	2569	2577	9	ILLDQALV	Consensus (ann/comblib_sidney2008/smm)	0.5
1236	HLA-A*02:01	orf1ab polyprotein	2782	2790	9	FVAAIFYLI	Consensus (ann/comblib_sidney2008/smm)	0.5
1237	HLA-A*02:01	orf1ab polyprotein	2785	2793	9	AIFYLITPV	Consensus (ann/comblib_sidney2008/smm)	0.5
1238	HLA-A*02:01	orf1ab polyprotein	3115	3123	9	YLTNDVSFL	Consensus (ann/comblib_sidney2008/smm)	0.5
1239	HLA-A*02:01	orf1ab polyprotein	3467	3475	9	VLAWLYAAV	Consensus (ann/comblib_sidney2008/smm)	0.5
1240	HLA-A*02:01	orf1ab polyprotein	3583	3591	9	LLLTILTSL	Consensus (ann/comblib_sidney2008/smm)	0.5
1241	HLA-A*02:01	orf1ab polyprotein	3587	3595	9	ILTSLLVLV	Consensus (ann/comblib_sidney2008/smm)	0.5
1242	HLA-A*02:01	orf1ab polyprotein	3753	3761	9	FLARGIVFM	Consensus (ann/comblib_sidney2008/smm)	0.5
1243	HLA-A*02:01	orf1ab polyprotein	3886	3894	9	KLWAQCQVL	Consensus (ann/comblib_sidney2008/smm)	0.5

1244	HLA-A*02:01	orf1ab polyprotein	5059	5067	9	VMCGGSLYV	Consensus (ann/comblib_sidney2008/smm)	0.5
1245	HLA-A*02:01	orf1ab polyprotein	5246	5254	9	LMIERFVSL	Consensus (ann/comblib_sidney2008/smm)	0.5
1246	HLA-A*02:01	orf1ab polyprotein	5291	5299	9	MLDMYSVML	Consensus (ann/comblib_sidney2008/smm)	0.5
1247	HLA-A*02:01	orf1ab polyprotein	5542	5550	9	KLNVDYFV	Consensus (ann/comblib_sidney2008/smm)	0.5
1248	HLA-A*02:01	orf1ab polyprotein	6101	6109	9	NLSDRVVFV	Consensus (ann/comblib_sidney2008/smm)	0.5
1249	HLA-A*02:01	orf1ab polyprotein	6425	6433	9	MMISAGFSL	Consensus (ann/comblib_sidney2008/smm)	0.5
1250	HLA-A*02:06	orf1ab polyprotein	679	688	10	FKLVNKFLAL	Consensus (ann/smm)	0.5
1251	HLA-A*03:01	orf1ab polyprotein	6865	6874	10	VIHFGAGSDK	Consensus (ann/smm)	0.5
1252	HLA-A*11:01	orf1ab polyprotein	613	623	11	LTNIFGTVYEK	Consensus (ann/smm)	0.5
1253	HLA-A*11:01	orf1ab polyprotein	5504	5513	10	YVFTGYRVTK	Consensus (ann/smm)	0.5
1254	HLA-A*11:01	orf1ab polyprotein	314	322	9	QMCLSTLMK	Consensus (ann/smm)	0.5
1255	HLA-A*11:01	orf1ab polyprotein	1773	1781	9	TLSYEQFKK	Consensus (ann/smm)	0.5
1256	HLA-A*24:02	orf1ab polyprotein	3249	3257	9	LYQPQTSI	Consensus (ann/smm)	0.5
1257	HLA-A*33:03	orf1ab polyprotein	236	244	9	HEIAWYTER	netmhcpa_el	0.5
1258	HLA-A*33:03	orf1ab polyprotein	2374	2382	9	MAPISAMVR	netmhcpa_el	0.5
1259	HLA-A*33:03	orf1ab polyprotein	3360	3368	9	KTPKYKFVR	netmhcpa_el	0.5
1260	HLA-A*33:03	orf1ab polyprotein	3472	3480	9	YAAVINGDR	netmhcpa_el	0.5
1261	HLA-A*33:03	orf1ab polyprotein	5445	5453	9	ILANTCTER	netmhcpa_el	0.5
1262	HLA-A*33:03	orf1ab polyprotein	5798	5806	9	MFYKGVITH	netmhcpa_el	0.5
1263	HLA-A*33:03	orf1ab polyprotein	7022	7030	9	MHANYIFWR	netmhcpa_el	0.5
1264	HLA-A*33:03	orf1ab polyprotein	7023	7030	8	HANYIFWR	netmhcpa_el	0.5
1265	HLA-A*33:03	orf1ab polyprotein	2519	2528	10	SHFVNLDNLR	netmhcpa_el	0.5
1266	HLA-A*33:03	orf1ab polyprotein	4813	4822	10	DFAVSKGFFK	netmhcpa_el	0.5
1267	HLA-A*33:03	orf1ab polyprotein	5875	5884	10	ETAHSCNVNR	netmhcpa_el	0.5
1268	HLA-A*01:01	orf1ab polyprotein	5450	5458	9	CTERLKLFA	Consensus (ann/smm)	0.49
1269	HLA-A*01:01	orf1ab polyprotein	2905	2913	9	YTDFATSAC	Consensus (ann/smm)	0.49
1270	HLA-A*01:01	orf1ab polyprotein	1247	1256	10	KFLTENLLLY	Consensus (ann/smm)	0.49
1271	HLA-A*01:01	orf1ab polyprotein	3207	3216	10	YLALYNKYKY	Consensus (ann/smm)	0.49
1272	HLA-A*02:06	orf1ab polyprotein	3605	3614	10	FLYENAFLPF	Consensus (ann/smm)	0.49

1273	HLA-A*02:06	orf1ab polyprotein	5630	5638	9	YTACSHAAV	Consensus (ann/smm)	0.49
1274	HLA-A*03:01	orf1ab polyprotein	1561	1569	9	SLREVRTIK	Consensus (ann/smm)	0.49
1275	HLA-A*03:01	orf1ab polyprotein	5167	5175	9	LVASIKNFK	Consensus (ann/smm)	0.49
1276	HLA-A*11:01	orf1ab polyprotein	5392	5400	9	MSYYCKSHK	Consensus (ann/smm)	0.49
1277	HLA-A*11:01	orf1ab polyprotein	1175	1185	11	LAVFDKNLYDK	Consensus (ann/smm)	0.49
1278	HLA-A*11:01	orf1ab polyprotein	5517	5526	10	VQIGEYTFEK	Consensus (ann/smm)	0.49
1279	HLA-A*11:01	orf1ab polyprotein	2977	2985	9	TTFDSEYCR	Consensus (ann/smm)	0.49
1280	HLA-A*11:01	orf1ab polyprotein	5518	5526	9	QIGEYTFEK	Consensus (ann/smm)	0.49
1281	HLA-A*24:02	orf1ab polyprotein	6775	6783	9	DYTEISFML	Consensus (ann/smm)	0.49
1282	HLA-A*24:02	orf1ab polyprotein	1970	1979	10	IDYKHYTPSF	Consensus (ann/smm)	0.49
1283	HLA-A*26:01	orf1ab polyprotein	2136	2144	9	DTIANYAKP	Consensus (ann/smm)	0.49
1284	HLA-A*26:01	orf1ab polyprotein	1637	1646	10	TTDPSFLGRY	Consensus (ann/smm)	0.49
1285	HLA-A*26:01	orf1ab polyprotein	4264	4272	9	STVLSFCAF	Consensus (ann/smm)	0.49
1286	HLA-A*33:03	orf1ab polyprotein	3534	3542	9	LLQNGMNGR	netmhcpa_el	0.49
1287	HLA-A*33:03	orf1ab polyprotein	4045	4053	9	LNNIINNAR	netmhcpa_el	0.49
1288	HLA-A*33:03	orf1ab polyprotein	4939	4947	9	AISAKNRAR	netmhcpa_el	0.49
1289	HLA-A*33:03	orf1ab polyprotein	5039	5046	8	SLSHRFYR	netmhcpa_el	0.49
1290	HLA-A*33:03	orf1ab polyprotein	6643	6650	8	ETYFTQSR	netmhcpa_el	0.49
1291	HLA-A*33:03	orf1ab polyprotein	4896	4905	10	FPFNKWGKAR	netmhcpa_el	0.49
1292	HLA-A*33:03	orf1ab polyprotein	6855	6864	10	LTLAVPYNMR	netmhcpa_el	0.49
1293	HLA-A*33:03	orf1ab polyprotein	6875	6884	10	GVAPGTAVLR	netmhcpa_el	0.49
1294	HLA-A*01:01	orf1ab polyprotein	3217	3226	10	FSGAMDTSY	Consensus (ann/smm)	0.48
1295	HLA-A*01:01	orf1ab polyprotein	6268	6276	9	QADVEWKFY	Consensus (ann/smm)	0.48
1296	HLA-A*01:01	orf1ab polyprotein	611	621	11	QWLTNIFGTVY	Consensus (ann/smm)	0.48
1297	HLA-A*02:01	orf1ab polyprotein	1444	1453	10	TLVTMPLGYV	Consensus (ann/smm)	0.48
1298	HLA-A*02:06	orf1ab polyprotein	641	649	9	FLRDGWEIV	Consensus (ann/smm)	0.48
1299	HLA-A*02:06	orf1ab polyprotein	3621	3629	9	MSAFAMMFV	Consensus (ann/smm)	0.48
1300	HLA-A*02:06	orf1ab polyprotein	5133	5141	9	FVNEFYAYL	Consensus (ann/smm)	0.48
1301	HLA-A*02:06	orf1ab polyprotein	6108	6117	10	FVLWAHGFEI	Consensus (ann/smm)	0.48

1302	HLA-A*03:01	orf1ab polyprotein	5343	5352	10	CIRRPFLCCK	Consensus (ann/smm)	0.48
1303	HLA-A*11:01	orf1ab polyprotein	49	58	10	GTCGLVEVEK	Consensus (ann/smm)	0.48
1304	HLA-A*11:01	orf1ab polyprotein	5205	5213	9	CSQHTMLVK	Consensus (ann/smm)	0.48
1305	HLA-A*11:01	orf1ab polyprotein	6554	6562	9	CSMTDIAKK	Consensus (ann/smm)	0.48
1306	HLA-A*26:01	orf1ab polyprotein	5614	5622	9	HFAIGLALY	Consensus (ann/smm)	0.48
1307	HLA-A*26:01	orf1ab polyprotein	6434	6442	9	WVYKQFDY	Consensus (ann/smm)	0.48
1308	HLA-A*26:01	orf1ab polyprotein	1205	1214	10	EIPKEEVKPF	Consensus (ann/smm)	0.48
1309	HLA-A*31:01	orf1ab polyprotein	4958	4966	9	MTNRQFHQK	Consensus (ann/smm)	0.48
1310	HLA-A*33:03	orf1ab polyprotein	3330	3339	10	LVQAGNVQLR	netmhcpa_el	0.48
1311	HLA-A*01:01	orf1ab polyprotein	4511	4521	11	LTKYTMADLVY	Consensus (ann/smm)	0.47
1312	HLA-A*01:01	orf1ab polyprotein	1443	1452	10	ETLVTMPLGY	Consensus (ann/smm)	0.47
1313	HLA-A*02:01	orf1ab polyprotein	2168	2177	10	YMPYFFLLL	Consensus (ann/smm)	0.47
1314	HLA-A*02:01	orf1ab polyprotein	2229	2238	10	IIIWFLLSV	Consensus (ann/smm)	0.47
1315	HLA-A*02:06	orf1ab polyprotein	2785	2793	9	AIFYLITPV	Consensus (ann/smm)	0.47
1316	HLA-A*03:01	orf1ab polyprotein	3107	3115	9	VIYLYLTFY	Consensus (ann/smm)	0.47
1317	HLA-A*03:01	orf1ab polyprotein	7038	7047	10	SSYSLFDMSK	Consensus (ann/smm)	0.47
1318	HLA-A*11:01	orf1ab polyprotein	5023	5033	11	RIMASLVLARK	Consensus (ann/smm)	0.47
1319	HLA-A*11:01	orf1ab polyprotein	3834	3843	10	SIDAFKLNK	Consensus (ann/smm)	0.47
1320	HLA-A*11:01	orf1ab polyprotein	273	282	10	FVFPLNSIK	Consensus (ann/smm)	0.47
1321	HLA-A*11:01	orf1ab polyprotein	3259	3268	10	SAVLQSGFRK	Consensus (ann/smm)	0.47
1322	HLA-A*24:02	orf1ab polyprotein	4629	4637	9	YYSLLMPIL	Consensus (ann/smm)	0.47
1323	HLA-A*24:02	orf1ab polyprotein	2436	2444	9	VYANGGKGF	Consensus (ann/smm)	0.47
1324	HLA-A*24:02	orf1ab polyprotein	4628	4637	10	SYYSLLMPIL	Consensus (ann/smm)	0.47
1325	HLA-A*24:02	orf1ab polyprotein	3206	3214	9	RYLALYNKY	Consensus (ann/smm)	0.47
1326	HLA-A*24:02	orf1ab polyprotein	3788	3797	10	YFCTCYGLF	Consensus (ann/smm)	0.47
1327	HLA-A*26:01	orf1ab polyprotein	5974	5982	9	MTYRRLISM	Consensus (ann/smm)	0.47
1328	HLA-A*26:01	orf1ab polyprotein	1891	1900	10	EIDPKLDNYY	Consensus (ann/smm)	0.47
1329	HLA-A*33:03	orf1ab polyprotein	1396	1404	9	KAIVSTIQR	netmhcpa_el	0.47
1330	HLA-A*33:03	orf1ab polyprotein	543	550	8	VVRSIFSR	netmhcpa_el	0.47

1331	HLA-A*33:03	orf1ab polyprotein	3471	3480	10	LYAAVINGDR	netmhcpa_el	0.47
1332	HLA-A*33:03	orf1ab polyprotein	4401	4410	10	NRVCGVSAAR	netmhcpa_el	0.47
1333	HLA-A*01:01	orf1ab polyprotein	3181	3190	10	CTFLLNKEMY	Consensus (ann/smm)	0.46
1334	HLA-A*03:01	orf1ab polyprotein	1057	1066	10	VVNAANVYLK	Consensus (ann/smm)	0.46
1335	HLA-A*03:01	orf1ab polyprotein	3710	3719	10	TLMNVLTLY	Consensus (ann/smm)	0.46
1336	HLA-A*03:01	orf1ab polyprotein	4368	4377	10	TVCTVCGMWK	Consensus (ann/smm)	0.46
1337	HLA-A*03:01	orf1ab polyprotein	6623	6632	10	AVKTQFNYYK	Consensus (ann/smm)	0.46
1338	HLA-A*11:01	orf1ab polyprotein	4071	4081	11	MVVIPDYNTYK	Consensus (ann/smm)	0.46
1339	HLA-A*11:01	orf1ab polyprotein	6427	6437	11	ISAGFSLWVYK	Consensus (ann/smm)	0.46
1340	HLA-A*11:01	orf1ab polyprotein	1387	1396	10	KLMPVCVETK	Consensus (ann/smm)	0.46
1341	HLA-A*11:01	orf1ab polyprotein	4977	4985	9	ATVVIKTSK	Consensus (ann/smm)	0.46
1342	HLA-A*11:01	orf1ab polyprotein	4073	4081	9	VIPDYNTYK	Consensus (ann/smm)	0.46
1343	HLA-A*24:02	orf1ab polyprotein	3722	3731	10	YYGNALDQAI	Consensus (ann/smm)	0.46
1344	HLA-A*24:02	orf1ab polyprotein	4548	4557	10	YFNKKDWYDF	Consensus (ann/smm)	0.46
1345	HLA-A*24:02	orf1ab polyprotein	3658	3666	9	SWVMRIMTW	Consensus (ann/smm)	0.46
1346	HLA-A*24:02	orf1ab polyprotein	6844	6852	9	KYTQLCQYL	Consensus (ann/smm)	0.46
1347	HLA-A*26:01	orf1ab polyprotein	1766	1774	9	EAVMYMGTL	Consensus (ann/smm)	0.46
1348	HLA-A*26:01	orf1ab polyprotein	2246	2254	9	STAALGVLM	Consensus (ann/smm)	0.46
1349	HLA-A*26:01	orf1ab polyprotein	2468	2476	9	EVARDLSLQ	Consensus (ann/smm)	0.46
1350	HLA-A*31:01	orf1ab polyprotein	5999	6009	11	ITREEAIRHVR	Consensus (ann/smm)	0.46
1351	HLA-A*31:01	orf1ab polyprotein	3003	3012	10	RWVLNNDYYR	Consensus (ann/smm)	0.46
1352	HLA-A*31:01	orf1ab polyprotein	4029	4038	10	MQTMLFTMLR	Consensus (ann/smm)	0.46
1353	HLA-A*31:01	orf1ab polyprotein	4490	4497	8	KHDFKFR	ann	0.46
1354	HLA-A*31:01	orf1ab polyprotein	7023	7030	8	HANYIFWR	ann	0.46
1355	HLA-A*33:03	orf1ab polyprotein	2217	2225	9	YLKSPNFSK	netmhcpa_el	0.46
1356	HLA-A*33:03	orf1ab polyprotein	5173	5181	9	NFKSVLYYQ	netmhcpa_el	0.46
1357	HLA-A*33:03	orf1ab polyprotein	5911	5919	9	FTSLEIPRR	netmhcpa_el	0.46
1358	HLA-A*33:03	orf1ab polyprotein	7077	7085	9	RLIIRENNR	netmhcpa_el	0.46
1359	HLA-A*33:03	orf1ab polyprotein	1394	1404	11	ETKAIIVSTIQR	netmhcpa_el	0.46

1360	HLA-A*33:03	orf1ab polyprotein	3441	3451	11	EGNFYGPVFVDR	netmhcpa_el	0.46
1361	HLA-A*33:03	orf1ab polyprotein	1944	1953	10	LTGYKKPASR	netmhcpa_el	0.46
1362	HLA-A*01:01	orf1ab polyprotein	5615	5623	9	FAIGLALYY	Consensus (ann/smm)	0.45
1363	HLA-A*01:01	orf1ab polyprotein	917	925	9	ASHMYCSFY	Consensus (ann/smm)	0.45
1364	HLA-A*02:06	orf1ab polyprotein	3586	3595	10	TILTSLLVLV	Consensus (ann/smm)	0.45
1365	HLA-A*02:06	orf1ab polyprotein	480	488	9	FSASTSAFV	Consensus (ann/smm)	0.45
1366	HLA-A*02:06	orf1ab polyprotein	3083	3091	9	LLFLMSFTV	Consensus (ann/smm)	0.45
1367	HLA-A*02:06	orf1ab polyprotein	5228	5236	9	RILGAGCFV	Consensus (ann/smm)	0.45
1368	HLA-A*03:01	orf1ab polyprotein	5273	5282	10	FHLYLQYIRK	Consensus (ann/smm)	0.45
1369	HLA-A*03:01	orf1ab polyprotein	4757	4766	10	RLSFKELLY	Consensus (ann/smm)	0.45
1370	HLA-A*11:01	orf1ab polyprotein	4715	4724	10	PTSGPLVRK	Consensus (ann/smm)	0.45
1371	HLA-A*24:02	orf1ab polyprotein	4461	4469	9	YFVVKRHTF	Consensus (ann/smm)	0.45
1372	HLA-A*31:01	orf1ab polyprotein	710	718	9	VTHSKGLYR	Consensus (ann/smm)	0.45
1373	HLA-A*31:01	orf1ab polyprotein	5133	5142	10	FVNEFYAYLR	Consensus (ann/smm)	0.45
1374	HLA-A*31:01	orf1ab polyprotein	4439	4447	9	KFLKTNCCR	Consensus (ann/smm)	0.45
1375	HLA-A*33:03	orf1ab polyprotein	16	24	9	LSPVLQVR	netmhcpa_el	0.45
1376	HLA-A*33:03	orf1ab polyprotein	1378	1386	9	MLAHAEETR	netmhcpa_el	0.45
1377	HLA-A*33:03	orf1ab polyprotein	2718	2726	9	FMSLSEQLR	netmhcpa_el	0.45
1378	HLA-A*33:03	orf1ab polyprotein	5563	5572	10	TLVPQEHYVR	netmhcpa_el	0.45
1379	HLA-A*02:06	orf1ab polyprotein	3098	3107	10	YSFLPGVYSV	Consensus (ann/smm)	0.44
1380	HLA-A*11:01	orf1ab polyprotein	3106	3115	10	SVIYLYLTFY	Consensus (ann/smm)	0.44
1381	HLA-A*11:01	orf1ab polyprotein	2790	2798	9	ITPVHVMSK	Consensus (ann/smm)	0.44
1382	HLA-A*11:01	orf1ab polyprotein	5167	5175	9	LVASIKNFK	Consensus (ann/smm)	0.44
1383	HLA-A*24:02	orf1ab polyprotein	7020	7028	9	YVMHANYIF	Consensus (ann/smm)	0.44
1384	HLA-A*26:01	orf1ab polyprotein	4272	4280	9	FAVDAAKAY	Consensus (ann/smm)	0.44
1385	HLA-A*33:03	orf1ab polyprotein	3062	3069	8	YFMRFR	netmhcpa_el	0.44
1386	HLA-A*33:03	orf1ab polyprotein	708	718	11	TFVTHSKGLYR	netmhcpa_el	0.44
1387	HLA-A*33:03	orf1ab polyprotein	5881	5891	11	NVNRFNVAITR	netmhcpa_el	0.44
1388	HLA-A*01:01	orf1ab polyprotein	2235	2245	11	LLSVCLGSLIY	Consensus (ann/smm)	0.43

1389	HLA-A*01:01	orf1ab polyprotein	896	906	11	DLDEWSMATYY	Consensus (ann/smm)	0.43
1390	HLA-A*01:01	orf1ab polyprotein	3201	3211	11	LTQYNRYLALY	Consensus (ann/smm)	0.43
1391	HLA-A*02:06	orf1ab polyprotein	825	833	9	FGDDTVIEV	Consensus (ann/smm)	0.43
1392	HLA-A*02:06	orf1ab polyprotein	3662	3670	9	RIMTWLDMV	Consensus (ann/smm)	0.43
1393	HLA-A*02:06	orf1ab polyprotein	2229	2238	10	IIIWFLLLSV	Consensus (ann/smm)	0.43
1394	HLA-A*02:06	orf1ab polyprotein	6425	6433	9	MMISAGFSL	Consensus (ann/smm)	0.43
1395	HLA-A*03:01	orf1ab polyprotein	2719	2727	9	MSLSEQLRK	Consensus (ann/smm)	0.43
1396	HLA-A*03:01	orf1ab polyprotein	2139	2148	10	ANYAKPFLNK	Consensus (ann/smm)	0.43
1397	HLA-A*03:01	orf1ab polyprotein	4985	4995	11	KFYGGWHNMLK	Consensus (ann/smm)	0.43
1398	HLA-A*11:01	orf1ab polyprotein	674	684	11	SVQTFKLVNK	Consensus (ann/smm)	0.43
1399	HLA-A*11:01	orf1ab polyprotein	5532	5542	11	AVVYRGTTTYK	Consensus (ann/smm)	0.43
1400	HLA-A*11:01	orf1ab polyprotein	282	291	10	KTIQPRVEKK	Consensus (ann/smm)	0.43
1401	HLA-A*11:01	orf1ab polyprotein	2051	2059	9	VVENPTIQK	Consensus (ann/smm)	0.43
1402	HLA-A*11:01	orf1ab polyprotein	4775	4783	9	ASGNLLLDK	Consensus (ann/smm)	0.43
1403	HLA-A*11:01	orf1ab polyprotein	5455	5463	9	KLFAAETLK	Consensus (ann/smm)	0.43
1404	HLA-A*11:01	orf1ab polyprotein	2307	2315	9	IQITISSFK	Consensus (ann/smm)	0.43
1405	HLA-A*11:01	orf1ab polyprotein	4425	4433	9	RAFDIYNDK	Consensus (ann/smm)	0.43
1406	HLA-A*24:02	orf1ab polyprotein	2953	2962	10	RYVLMDSII	Consensus (ann/smm)	0.43
1407	HLA-A*24:02	orf1ab polyprotein	3605	3614	10	FLYENAFLPF	Consensus (ann/smm)	0.43
1408	HLA-A*24:02	orf1ab polyprotein	2324	2334	11	VAEWFLAYILF	Consensus (ann/smm)	0.43
1409	HLA-A*24:02	orf1ab polyprotein	3653	3662	10	VYMPASWVMR	Consensus (ann/smm)	0.43
1410	HLA-A*26:01	orf1ab polyprotein	5585	5593	9	EFSSNVANY	Consensus (ann/smm)	0.43
1411	HLA-A*02:01	orf1ab polyprotein	6076	6086	11	PLMYKGLPWNV	Consensus (ann/smm)	0.42
1412	HLA-A*02:01	orf1ab polyprotein	3115	3124	10	YLTNDVSFLA	Consensus (ann/smm)	0.42
1413	HLA-A*02:06	orf1ab polyprotein	3635	3644	10	FLCLFLLPSL	Consensus (ann/smm)	0.42
1414	HLA-A*02:06	orf1ab polyprotein	2168	2176	9	YMPYFFTL	Consensus (ann/smm)	0.42
1415	HLA-A*03:01	orf1ab polyprotein	1176	1185	10	AVFDKNLYDK	Consensus (ann/smm)	0.42
1416	HLA-A*03:01	orf1ab polyprotein	2075	2085	11	IILKPANNSLK	Consensus (ann/smm)	0.42
1417	HLA-A*11:01	orf1ab polyprotein	1767	1776	10	AVMYMGTLISY	Consensus (ann/smm)	0.42

1418	HLA-A*11:01	orf1ab polyprotein	4442	4451	10	KTNCCRFQEK	Consensus (ann/smm)	0.42
1419	HLA-A*11:01	orf1ab polyprotein	710	719	10	VTHSKGLYRK	Consensus (ann/smm)	0.42
1420	HLA-A*11:01	orf1ab polyprotein	3344	3353	10	SMQNCVLKLK	Consensus (ann/smm)	0.42
1421	HLA-A*11:01	orf1ab polyprotein	6532	6541	10	AANTVIWDYK	Consensus (ann/smm)	0.42
1422	HLA-A*11:01	orf1ab polyprotein	6777	6786	10	TEISFMLWCK	Consensus (ann/smm)	0.42
1423	HLA-A*11:01	orf1ab polyprotein	2384	2392	9	YIFFASFYY	Consensus (ann/smm)	0.42
1424	HLA-A*11:01	orf1ab polyprotein	2915	2923	9	LAAECTIFK	Consensus (ann/smm)	0.42
1425	HLA-A*24:02	orf1ab polyprotein	3810	3820	11	VYDYLVSTQEF	Consensus (ann/smm)	0.42
1426	HLA-A*24:02	orf1ab polyprotein	3138	3146	9	FWITIAYII	Consensus (ann/smm)	0.42
1427	HLA-A*26:01	orf1ab polyprotein	5078	5086	9	TTAYANSVF	Consensus (ann/smm)	0.42
1428	HLA-A*26:01	orf1ab polyprotein	525	534	10	EQKSILSPLY	Consensus (ann/smm)	0.42
1429	HLA-A*31:01	orf1ab polyprotein	3219	3227	9	GAMDTTSYR	Consensus (ann/smm)	0.42
1430	HLA-A*31:01	orf1ab polyprotein	4580	4589	10	KTVQFCDAMR	Consensus (ann/smm)	0.42
1431	HLA-A*33:03	orf1ab polyprotein	5564	5572	9	LVPQEHYVR	netmhcpa_el	0.42
1432	HLA-A*33:03	orf1ab polyprotein	3812	3821	10	DYLVSTQEFR	netmhcpa_el	0.42
1433	HLA-A*33:03	orf1ab polyprotein	5992	6001	10	NGYPNMFITR	netmhcpa_el	0.42
1434	HLA-A*01:01	orf1ab polyprotein	2551	2560	10	ESSAKSASVY	Consensus (ann/smm)	0.41
1435	HLA-A*01:01	orf1ab polyprotein	1249	1257	9	LTENLLLYI	Consensus (ann/smm)	0.41
1436	HLA-A*01:01	orf1ab polyprotein	4083	4091	9	TCDGTTFTY	Consensus (ann/smm)	0.41
1437	HLA-A*02:01	orf1ab polyprotein	1796	1805	10	YLVQQESPFV	Consensus (ann/smm)	0.41
1438	HLA-A*02:06	orf1ab polyprotein	3731	3740	10	ISMWALIISV	Consensus (ann/smm)	0.41
1439	HLA-A*03:01	orf1ab polyprotein	6293	6301	9	YSYATHSDK	Consensus (ann/smm)	0.41
1440	HLA-A*03:01	orf1ab polyprotein	3260	3268	9	AVLQSGFRK	Consensus (ann/smm)	0.41
1441	HLA-A*03:01	orf1ab polyprotein	5005	5013	9	HLMGWDYPK	Consensus (ann/smm)	0.41
1442	HLA-A*03:01	orf1ab polyprotein	6477	6486	10	SIINNTVYTK	Consensus (ann/smm)	0.41
1443	HLA-A*11:01	orf1ab polyprotein	1188	1197	10	SSFLEMKSEK	Consensus (ann/smm)	0.41
1444	HLA-A*11:01	orf1ab polyprotein	6924	6933	10	LIISDMYDPK	Consensus (ann/smm)	0.41
1445	HLA-A*11:01	orf1ab polyprotein	2614	2622	9	ATAEAELAK	Consensus (ann/smm)	0.41
1446	HLA-A*11:01	orf1ab polyprotein	116	125	10	VAYRKVLLRK	Consensus (ann/smm)	0.41

1447	HLA-A*11:01	orf1ab polyprotein	252	261	10	QTPFEIKLAK	Consensus (ann/smm)	0.41
1448	HLA-A*11:01	orf1ab polyprotein	1772	1780	9	GTLSYEQFK	Consensus (ann/smm)	0.41
1449	HLA-A*11:01	orf1ab polyprotein	729	737	9	LLMPLKAPK	Consensus (ann/smm)	0.41
1450	HLA-A*11:01	orf1ab polyprotein	3995	4003	9	AAMQRKLEK	Consensus (ann/smm)	0.41
1451	HLA-A*24:02	orf1ab polyprotein	3812	3820	9	DYLVSTQEF	Consensus (ann/smm)	0.41
1452	HLA-A*24:02	orf1ab polyprotein	1634	1643	10	YYHTTDPNFL	Consensus (ann/smm)	0.41
1453	HLA-A*24:02	orf1ab polyprotein	3792	3800	9	CYGLFLCLL	Consensus (ann/smm)	0.41
1454	HLA-A*24:02	orf1ab polyprotein	1795	1804	10	KYLVQQESPF	Consensus (ann/smm)	0.41
1455	HLA-A*24:02	orf1ab polyprotein	1971	1979	9	DYKHYPSPF	Consensus (ann/smm)	0.41
1456	HLA-A*24:02	orf1ab polyprotein	2346	2354	9	IMQLFFSYF	Consensus (ann/smm)	0.41
1457	HLA-A*24:02	orf1ab polyprotein	3063	3071	9	YFMRFRRAF	Consensus (ann/smm)	0.41
1458	HLA-A*24:02	orf1ab polyprotein	2589	2598	10	KMFDAYVNTF	Consensus (ann/smm)	0.41
1459	HLA-A*31:01	orf1ab polyprotein	4733	4741	9	VVSTGYHFR	Consensus (ann/smm)	0.41
1460	HLA-A*31:01	orf1ab polyprotein	6808	6817	10	AMPNLYKMQR	Consensus (ann/smm)	0.41
1461	HLA-A*31:01	orf1ab polyprotein	394	402	9	KTILRKGGGR	Consensus (ann/smm)	0.41
1462	HLA-A*31:01	orf1ab polyprotein	5793	5801	9	AQCFKMFYK	Consensus (ann/smm)	0.41
1463	HLA-A*31:01	orf1ab polyprotein	7045	7053	9	MSKFPLKLR	Consensus (ann/smm)	0.41
1464	HLA-A*31:01	orf1ab polyprotein	3057	3066	10	VTCLAYYFMR	Consensus (ann/smm)	0.41
1465	HLA-A*33:03	orf1ab polyprotein	22	29	8	QVRDVLVR	netmhcpa_el	0.41
1466	HLA-A*01:01	orf1ab polyprotein	2292	2301	10	LSGLDSLDTY	Consensus (ann/smm)	0.4
1467	HLA-A*02:01	orf1ab polyprotein	1804	1812	9	FVMMSAPPA	Consensus (ann/comblib_sidney2008/smm)	0.4
1468	HLA-A*02:01	orf1ab polyprotein	2168	2176	9	YMPYFFTL	Consensus (ann/comblib_sidney2008/smm)	0.4
1469	HLA-A*02:01	orf1ab polyprotein	2230	2238	9	IIWFLLLSV	Consensus (ann/comblib_sidney2008/smm)	0.4
1470	HLA-A*02:01	orf1ab polyprotein	2348	2356	9	QLFFSYFAV	Consensus (ann/comblib_sidney2008/smm)	0.4
1471	HLA-A*02:01	orf1ab polyprotein	2884	2892	9	FLPRVFSVA	Consensus (ann/comblib_sidney2008/smm)	0.4
1472	HLA-A*02:01	orf1ab polyprotein	2901	2909	9	KLIEYDFA	Consensus (ann/comblib_sidney2008/smm)	0.4
1473	HLA-A*02:01	orf1ab polyprotein	4456	4464	9	NLIDSYFVV	Consensus (ann/comblib_sidney2008/smm)	0.4
1474	HLA-A*02:01	orf1ab polyprotein	4726	4734	9	FVDGVPFVV	Consensus (ann/comblib_sidney2008/smm)	0.4
1475	HLA-A*02:01	orf1ab polyprotein	5365	5373	9	LVLSVNPVY	Consensus (ann/comblib_sidney2008/smm)	0.4

1476	HLA-A*02:01	orf1ab polyprotein	5470	5478	9	KLSYGIATV	Consensus (ann/comblib_sidney2008/smm)	0.4
1477	HLA-A*03:01	orf1ab polyprotein	5709	5718	10	SVVNARLRAK	Consensus (ann/smm)	0.4
1478	HLA-A*11:01	orf1ab polyprotein	2305	2315	11	ETIQITISFK	Consensus (ann/smm)	0.4
1479	HLA-A*11:01	orf1ab polyprotein	1851	1860	10	ALLTKSSEYK	Consensus (ann/smm)	0.4
1480	HLA-A*11:01	orf1ab polyprotein	5586	5595	10	FSSNVANYQK	Consensus (ann/smm)	0.4
1481	HLA-A*24:02	orf1ab polyprotein	4171	4180	10	YYNTTKGGRF	Consensus (ann/smm)	0.4
1482	HLA-A*26:01	orf1ab polyprotein	6977	6985	9	DLYKLMGHF	Consensus (ann/smm)	0.4
1483	HLA-A*26:01	orf1ab polyprotein	3780	3789	10	MLVYCFLGYF	Consensus (ann/smm)	0.4
1484	HLA-A*31:01	orf1ab polyprotein	6080	6088	9	KGLPWNVVR	Consensus (ann/smm)	0.4
1485	HLA-A*31:01	orf1ab polyprotein	4671	4680	10	RLKLFDRYFK	Consensus (ann/smm)	0.4
1486	HLA-A*33:03	orf1ab polyprotein	1730	1738	9	ETMSYLFQH	netmhcpa_el	0.4
1487	HLA-A*33:03	orf1ab polyprotein	3154	3162	9	YWFFSNYLK	netmhcpa_el	0.4
1488	HLA-A*33:03	orf1ab polyprotein	4567	4575	9	YANLGERVR	netmhcpa_el	0.4
1489	HLA-A*33:03	orf1ab polyprotein	3442	3451	10	GNFYGPFVDR	netmhcpa_el	0.4
1490	HLA-A*33:03	orf1ab polyprotein	4488	4497	10	VAKHDFKFR	netmhcpa_el	0.4
1491	HLA-A*01:01	orf1ab polyprotein	4082	4091	10	NTCDGTTFTY	Consensus (ann/smm)	0.39
1492	HLA-A*02:01	orf1ab polyprotein	3089	3097	9	FTVLCLTPV	Consensus (ann/comblib_sidney2008/smm)	0.39
1493	HLA-A*02:06	orf1ab polyprotein	2864	2872	9	FVVPGLPGT	Consensus (ann/smm)	0.39
1494	HLA-A*02:06	orf1ab polyprotein	2901	2909	9	KLIEYDFA	Consensus (ann/smm)	0.39
1495	HLA-A*02:06	orf1ab polyprotein	3732	3740	9	SMWALIISV	Consensus (ann/smm)	0.39
1496	HLA-A*11:01	orf1ab polyprotein	4368	4377	10	TVCTVCGMWK	Consensus (ann/smm)	0.39
1497	HLA-A*11:01	orf1ab polyprotein	615	623	9	NIFGTVYEK	Consensus (ann/smm)	0.39
1498	HLA-A*11:01	orf1ab polyprotein	3672	3680	9	TLSLGFKLLK	Consensus (ann/smm)	0.39
1499	HLA-A*26:01	orf1ab polyprotein	5132	5140	9	DFVNEFYAY	Consensus (ann/smm)	0.39
1500	HLA-A*26:01	orf1ab polyprotein	2383	2392	10	MYIFFASFYY	Consensus (ann/smm)	0.39
1501	HLA-A*26:01	orf1ab polyprotein	4729	4738	10	GVPFVSTGY	Consensus (ann/smm)	0.39
1502	HLA-A*26:01	orf1ab polyprotein	5154	5162	9	AVVCFNSTY	Consensus (ann/smm)	0.39
1503	HLA-A*26:01	orf1ab polyprotein	5298	5307	10	MLTNDNTRSY	Consensus (ann/smm)	0.39
1504	HLA-A*31:01	orf1ab polyprotein	4224	4232	9	KVKYLYFIK	Consensus (ann/smm)	0.39

1505	HLA-A*33:03	orf1ab polyprotein	5298	5306	9	MLTNDNTR	netmhcpa_el	0.39
1506	HLA-A*33:03	orf1ab polyprotein	5505	5513	9	VFTGYRVTK	netmhcpa_el	0.39
1507	HLA-A*01:01	orf1ab polyprotein	2254	2262	9	MSNLGMPSY	Consensus (ann/smm)	0.38
1508	HLA-A*02:06	orf1ab polyprotein	6245	6253	9	ALLADKFPV	Consensus (ann/smm)	0.38
1509	HLA-A*02:06	orf1ab polyprotein	2392	2400	9	YVWKSIVHV	Consensus (ann/smm)	0.38
1510	HLA-A*03:01	orf1ab polyprotein	2383	2392	10	MYIFFASFYY	Consensus (ann/smm)	0.38
1511	HLA-A*03:01	orf1ab polyprotein	1309	1319	11	TTEMLAKLRK	Consensus (ann/smm)	0.38
1512	HLA-A*11:01	orf1ab polyprotein	3622	3632	11	SAFAMMFVKHK	Consensus (ann/smm)	0.38
1513	HLA-A*11:01	orf1ab polyprotein	4273	4281	9	AVDAAKAYK	Consensus (ann/smm)	0.38
1514	HLA-A*11:01	orf1ab polyprotein	5981	5989	9	SMMGFKMNY	Consensus (ann/smm)	0.38
1515	HLA-A*11:01	orf1ab polyprotein	6972	6980	9	HSWNADLYK	Consensus (ann/smm)	0.38
1516	HLA-A*11:01	orf1ab polyprotein	6622	6632	11	EAVKTQFNYYK	Consensus (ann/smm)	0.38
1517	HLA-A*11:01	orf1ab polyprotein	6552	6561	10	GVCSMTDIK	Consensus (ann/smm)	0.38
1518	HLA-A*11:01	orf1ab polyprotein	1887	1895	9	VVCTEIDPK	Consensus (ann/smm)	0.38
1519	HLA-A*24:02	orf1ab polyprotein	4986	4994	9	FYGGWHNML	Consensus (ann/smm)	0.38
1520	HLA-A*26:01	orf1ab polyprotein	5133	5141	9	FVNEFYAYL	Consensus (ann/smm)	0.38
1521	HLA-A*31:01	orf1ab polyprotein	6206	6214	9	AVHECFVKR	Consensus (ann/smm)	0.38
1522	HLA-A*31:01	orf1ab polyprotein	2412	2420	9	CYKRNTR	Consensus (ann/smm)	0.38
1523	HLA-A*33:03	orf1ab polyprotein	1116	1124	9	HVVGPVNVK	netmhcpa_el	0.38
1524	HLA-A*33:03	orf1ab polyprotein	3748	3756	9	VTTVMFLAR	netmhcpa_el	0.38
1525	HLA-A*33:03	orf1ab polyprotein	4190	4198	9	DLKWARFPK	netmhcpa_el	0.38
1526	HLA-A*33:03	orf1ab polyprotein	6227	6235	9	ELKINAACR	netmhcpa_el	0.38
1527	HLA-A*33:03	orf1ab polyprotein	533	542	10	LYAFASEAAR	netmhcpa_el	0.38
1528	HLA-A*01:01	orf1ab polyprotein	4758	4766	9	LSFKELLY	Consensus (ann/smm)	0.37
1529	HLA-A*01:01	orf1ab polyprotein	5072	5081	10	TSSGDATTAY	Consensus (ann/smm)	0.37
1530	HLA-A*02:01	orf1ab polyprotein	4089	4098	10	FTYASALWEI	Consensus (ann/smm)	0.37
1531	HLA-A*02:01	orf1ab polyprotein	6781	6790	10	FMLWCKDGHV	Consensus (ann/smm)	0.37
1532	HLA-A*02:06	orf1ab polyprotein	3806	3815	10	LTLGVYDYL	Consensus (ann/smm)	0.37
1533	HLA-A*02:06	orf1ab polyprotein	4363	4372	10	FTLKNTVCTV	Consensus (ann/smm)	0.37

1534	HLA-A*11:01	orf1ab polyprotein	5709	5718	10	SVVNARLRAK	Consensus (ann/smm)	0.37
1535	HLA-A*11:01	orf1ab polyprotein	1521	1529	9	TQLGIEFLK	Consensus (ann/smm)	0.37
1536	HLA-A*26:01	orf1ab polyprotein	3781	3789	9	LVYCYFLGYF	Consensus (ann/smm)	0.37
1537	HLA-A*33:03	orf1ab polyprotein	676	684	9	QTFFKLVNK	netmhcpa_el	0.37
1538	HLA-A*33:03	orf1ab polyprotein	4958	4966	9	MTNRQFHQK	netmhcpa_el	0.37
1539	HLA-A*33:03	orf1ab polyprotein	5534	5542	9	VYRGTTTYK	netmhcpa_el	0.37
1540	HLA-A*33:03	orf1ab polyprotein	6193	6203	11	HVASCDAIMTR	netmhcpa_el	0.37
1541	HLA-A*33:03	orf1ab polyprotein	6440	6450	11	DTYNLWNTFTR	netmhcpa_el	0.37
1542	HLA-A*02:06	orf1ab polyprotein	3709	3718	10	WTLMNVLTIV	Consensus (ann/smm)	0.36
1543	HLA-A*02:06	orf1ab polyprotein	878	886	9	AVIKTLQPV	Consensus (ann/smm)	0.36
1544	HLA-A*02:06	orf1ab polyprotein	2323	2332	10	LVAEWFLAYI	Consensus (ann/smm)	0.36
1545	HLA-A*02:06	orf1ab polyprotein	2363	2372	10	WLMWLIINLV	Consensus (ann/smm)	0.36
1546	HLA-A*02:06	orf1ab polyprotein	6036	6045	10	FSTGVNLVAV	Consensus (ann/smm)	0.36
1547	HLA-A*03:01	orf1ab polyprotein	120	129	10	KVLLRKNGNK	Consensus (ann/smm)	0.36
1548	HLA-A*03:01	orf1ab polyprotein	2191	2200	10	KASMPPTIAK	Consensus (ann/smm)	0.36
1549	HLA-A*11:01	orf1ab polyprotein	3920	3929	10	SMQGAVDINK	Consensus (ann/smm)	0.36
1550	HLA-A*11:01	orf1ab polyprotein	5255	5263	9	AIDAYPLTK	Consensus (ann/smm)	0.36
1551	HLA-A*24:02	orf1ab polyprotein	1674	1683	10	CYLATALLTL	Consensus (ann/smm)	0.36
1552	HLA-A*24:02	orf1ab polyprotein	248	257	10	SYELQTPFEI	Consensus (ann/smm)	0.36
1553	HLA-A*26:01	orf1ab polyprotein	3100	3109	10	FLPGVYSVIY	Consensus (ann/smm)	0.36
1554	HLA-A*26:01	orf1ab polyprotein	4367	4375	9	NTVCTVCGM	Consensus (ann/smm)	0.36
1555	HLA-A*26:01	orf1ab polyprotein	6622	6630	9	EAVKTQFNY	Consensus (ann/smm)	0.36
1556	HLA-A*33:03	orf1ab polyprotein	829	837	9	TVIEVQGYK	netmhcpa_el	0.36
1557	HLA-A*33:03	orf1ab polyprotein	634	643	10	KFKEGVEFLR	netmhcpa_el	0.36
1558	HLA-A*33:03	orf1ab polyprotein	2106	2115	10	TIKKPNELSR	netmhcpa_el	0.36
1559	HLA-A*33:03	orf1ab polyprotein	4186	4195	10	SDLQDLKWAR	netmhcpa_el	0.36
1560	HLA-A*01:01	orf1ab polyprotein	4539	4548	10	VTYNCCDDDY	Consensus (ann/smm)	0.35
1561	HLA-A*02:06	orf1ab polyprotein	3638	3647	10	LFLPLSLATV	Consensus (ann/smm)	0.35
1562	HLA-A*02:06	orf1ab polyprotein	5946	5954	9	TQAPTHLSV	Consensus (ann/smm)	0.35

1563	HLA-A*02:06	orf1ab polyprotein	6186	6194	9	CQVHGNAHV	Consensus (ann/smm)	0.35
1564	HLA-A*03:01	orf1ab polyprotein	3893	3902	10	QLHNDILLAK	Consensus (ann/smm)	0.35
1565	HLA-A*03:01	orf1ab polyprotein	1973	1981	9	KHYTPSFKK	Consensus (ann/smm)	0.35
1566	HLA-A*03:01	orf1ab polyprotein	4958	4966	9	MTNRQFHQK	Consensus (ann/smm)	0.35
1567	HLA-A*03:01	orf1ab polyprotein	5386	5394	9	QLYLGMSY	Consensus (ann/smm)	0.35
1568	HLA-A*03:01	orf1ab polyprotein	6702	6711	10	LLIGLAKRFK	Consensus (ann/smm)	0.35
1569	HLA-A*11:01	orf1ab polyprotein	6531	6541	11	IAANTVIWDYK	Consensus (ann/smm)	0.35
1570	HLA-A*11:01	orf1ab polyprotein	5059	5068	10	VMCGGSLYVK	Consensus (ann/smm)	0.35
1571	HLA-A*11:01	orf1ab polyprotein	5254	5263	10	LADAYPLTK	Consensus (ann/smm)	0.35
1572	HLA-A*11:01	orf1ab polyprotein	2719	2727	9	MSLSEQLRK	Consensus (ann/smm)	0.35
1573	HLA-A*24:02	orf1ab polyprotein	6418	6426	9	LYLDAYNMM	Consensus (ann/smm)	0.35
1574	HLA-A*24:02	orf1ab polyprotein	1898	1907	10	NYYKKDNSYF	Consensus (ann/smm)	0.35
1575	HLA-A*24:02	orf1ab polyprotein	3821	3830	10	RYMNSQGLLP	Consensus (ann/smm)	0.35
1576	HLA-A*24:02	orf1ab polyprotein	2779	2787	9	VFLFVAIF	Consensus (ann/smm)	0.35
1577	HLA-A*24:02	orf1ab polyprotein	5139	5147	9	AYLRKHFSM	Consensus (ann/smm)	0.35
1578	HLA-A*31:01	orf1ab polyprotein	6130	6138	9	RTCLCDRR	Consensus (ann/smm)	0.35
1579	HLA-A*33:03	orf1ab polyprotein	4716	4724	9	TSGPLVRK	netmhcpa_el	0.35
1580	HLA-A*33:03	orf1ab polyprotein	5997	6006	10	MFITREEAIR	netmhcpa_el	0.35
1581	HLA-A*01:01	orf1ab polyprotein	4841	4850	10	AISDYDYRY	Consensus (ann/smm)	0.34
1582	HLA-A*01:01	orf1ab polyprotein	1174	1183	10	YLAVFDKNLY	Consensus (ann/smm)	0.34
1583	HLA-A*01:01	orf1ab polyprotein	5858	5867	10	DSSQGSEYDY	Consensus (ann/smm)	0.34
1584	HLA-A*02:06	orf1ab polyprotein	4788	4797	10	FSVAALTNNV	Consensus (ann/smm)	0.34
1585	HLA-A*02:06	orf1ab polyprotein	1566	1574	9	RTIKVFTTV	Consensus (ann/smm)	0.34
1586	HLA-A*02:06	orf1ab polyprotein	4456	4464	9	NLIDSYFVV	Consensus (ann/smm)	0.34
1587	HLA-A*02:06	orf1ab polyprotein	5317	5326	10	YTPHTVLQAV	Consensus (ann/smm)	0.34
1588	HLA-A*03:01	orf1ab polyprotein	2306	2315	10	TIQITISFK	Consensus (ann/smm)	0.34
1589	HLA-A*03:01	orf1ab polyprotein	7003	7012	10	FLIGCNLYGK	Consensus (ann/smm)	0.34
1590	HLA-A*03:01	orf1ab polyprotein	314	322	9	QMCLSTLMK	Consensus (ann/smm)	0.34
1591	HLA-A*11:01	orf1ab polyprotein	6429	6437	9	AGFSLWVYK	Consensus (ann/smm)	0.34

1592	HLA-A*24:02	orf1ab polyprotein	3166	3175	10	VFNGVSFSTF	Consensus (ann/smm)	0.34
1593	HLA-A*24:02	orf1ab polyprotein	6775	6784	10	DYTEISFMLW	Consensus (ann/smm)	0.34
1594	HLA-A*24:02	orf1ab polyprotein	954	962	9	DYQGKPLEF	Consensus (ann/smm)	0.34
1595	HLA-A*26:01	orf1ab polyprotein	5299	5307	9	LTNDNSTRY	Consensus (ann/smm)	0.34
1596	HLA-A*26:01	orf1ab polyprotein	1414	1423	10	GVVDYGARFY	Consensus (ann/smm)	0.34
1597	HLA-A*26:01	orf1ab polyprotein	1024	1032	9	EVNSFSGYL	Consensus (ann/smm)	0.34
1598	HLA-A*26:01	orf1ab polyprotein	3373	3381	9	QTFSVLACY	Consensus (ann/smm)	0.34
1599	HLA-A*31:01	orf1ab polyprotein	2410	2417	8	MMCYKRNR	ann	0.34
1600	HLA-A*33:03	orf1ab polyprotein	5592	5600	9	NYQKVGMQK	netmhcpa_el	0.34
1601	HLA-A*01:01	orf1ab polyprotein	5298	5307	10	MLTNDNSTRY	Consensus (ann/smm)	0.33
1602	HLA-A*01:01	orf1ab polyprotein	2897	2905	9	YTPSKLIEY	Consensus (ann/smm)	0.33
1603	HLA-A*01:01	orf1ab polyprotein	6302	6310	9	FTDGVCLFW	Consensus (ann/smm)	0.33
1604	HLA-A*01:01	orf1ab polyprotein	1873	1882	10	YTTTIKPVTY	Consensus (ann/smm)	0.33
1605	HLA-A*02:01	orf1ab polyprotein	685	693	9	FLALCADSI	Consensus (ann/comblib_sidney2008/smm)	0.33
1606	HLA-A*02:01	orf1ab polyprotein	6980	6989	10	KLMGHFAWWT	Consensus (ann/smm)	0.33
1607	HLA-A*02:06	orf1ab polyprotein	3645	3653	9	ATVAYFNMV	Consensus (ann/smm)	0.33
1608	HLA-A*03:01	orf1ab polyprotein	2192	2200	9	ASMPPTIAK	Consensus (ann/smm)	0.33
1609	HLA-A*03:01	orf1ab polyprotein	3184	3192	9	LLNKEMYLK	Consensus (ann/smm)	0.33
1610	HLA-A*03:01	orf1ab polyprotein	4487	4495	9	AVAKHDFFK	Consensus (ann/smm)	0.33
1611	HLA-A*03:01	orf1ab polyprotein	3206	3215	10	RYLALYNKYK	Consensus (ann/smm)	0.33
1612	HLA-A*03:01	orf1ab polyprotein	3524	3532	9	VLDMCASLK	Consensus (ann/smm)	0.33
1613	HLA-A*03:01	orf1ab polyprotein	5981	5989	9	SMMGFKMNY	Consensus (ann/smm)	0.33
1614	HLA-A*11:01	orf1ab polyprotein	3523	3532	10	AVLDMCASLK	Consensus (ann/smm)	0.33
1615	HLA-A*11:01	orf1ab polyprotein	4774	4783	10	AASGNLLLDK	Consensus (ann/smm)	0.33
1616	HLA-A*11:01	orf1ab polyprotein	3103	3111	9	GVYSVIYLY	Consensus (ann/smm)	0.33
1617	HLA-A*24:02	orf1ab polyprotein	1633	1642	10	EYYHTTDPSP	Consensus (ann/smm)	0.33
1618	HLA-A*24:02	orf1ab polyprotein	3104	3114	11	VYSVIYLYLTF	Consensus (ann/smm)	0.33
1619	HLA-A*24:02	orf1ab polyprotein	835	843	9	GYKSVNITF	Consensus (ann/smm)	0.33
1620	HLA-A*24:02	orf1ab polyprotein	2326	2334	9	EWFLAYILF	Consensus (ann/smm)	0.33

1621	HLA-A*24:02	orf1ab polyprotein	4429	4437	9	IYNDKVAGF	Consensus (ann/smm)	0.33
1622	HLA-A*24:02	orf1ab polyprotein	2349	2358	10	LFFSYFAVHF	Consensus (ann/smm)	0.33
1623	HLA-A*26:01	orf1ab polyprotein	4979	4987	9	VVIGTSKFY	Consensus (ann/smm)	0.33
1624	HLA-A*26:01	orf1ab polyprotein	6440	6448	9	DTYNLWNTF	Consensus (ann/smm)	0.33
1625	HLA-A*26:01	orf1ab polyprotein	5614	5623	10	HFAIGLALYY	Consensus (ann/smm)	0.33
1626	HLA-A*26:01	orf1ab polyprotein	2201	2209	9	NTVKSVGKF	Consensus (ann/smm)	0.33
1627	HLA-A*26:01	orf1ab polyprotein	2384	2392	9	YIFFASFYY	Consensus (ann/smm)	0.33
1628	HLA-A*33:03	orf1ab polyprotein	4557	4565	9	FVENPDILR	netmhcpa_el	0.33
1629	HLA-A*33:03	orf1ab polyprotein	4814	4822	9	FAVSKGFFK	netmhcpa_el	0.33
1630	HLA-A*01:01	orf1ab polyprotein	5269	5277	9	YADVFLHLYL	Consensus (ann/smm)	0.32
1631	HLA-A*02:06	orf1ab polyprotein	1010	1019	10	PQLEMELTPV	Consensus (ann/smm)	0.32
1632	HLA-A*02:06	orf1ab polyprotein	1248	1257	10	FLTENLLLYI	Consensus (ann/smm)	0.32
1633	HLA-A*02:06	orf1ab polyprotein	2775	2783	9	KVTLVFLFV	Consensus (ann/smm)	0.32
1634	HLA-A*02:06	orf1ab polyprotein	3466	3475	10	NVLAWLYAAV	Consensus (ann/smm)	0.32
1635	HLA-A*02:06	orf1ab polyprotein	5469	5478	10	FKLSYGIATV	Consensus (ann/smm)	0.32
1636	HLA-A*02:06	orf1ab polyprotein	4029	4037	9	MQTMLFTML	Consensus (ann/smm)	0.32
1637	HLA-A*03:01	orf1ab polyprotein	3622	3630	9	SAFAMMFVK	Consensus (ann/smm)	0.32
1638	HLA-A*03:01	orf1ab polyprotein	4505	4513	9	HISRQRLTK	Consensus (ann/smm)	0.32
1639	HLA-A*11:01	orf1ab polyprotein	3343	3351	9	HSMQNCVLK	Consensus (ann/smm)	0.32
1640	HLA-A*24:02	orf1ab polyprotein	6418	6427	10	LYLDAYNMMI	Consensus (ann/smm)	0.32
1641	HLA-A*26:01	orf1ab polyprotein	2273	2281	9	STNVTIATY	Consensus (ann/smm)	0.32
1642	HLA-A*26:01	orf1ab polyprotein	3646	3654	9	TVAYFNMVY	Consensus (ann/smm)	0.32
1643	HLA-A*26:01	orf1ab polyprotein	5286	5294	9	ELTGHMLDM	Consensus (ann/smm)	0.32
1644	HLA-A*31:01	orf1ab polyprotein	3059	3068	10	CLAYYFMRFR	Consensus (ann/smm)	0.32
1645	HLA-A*31:01	orf1ab polyprotein	3653	3662	10	VYMPASWVMR	Consensus (ann/smm)	0.32
1646	HLA-A*33:03	orf1ab polyprotein	2328	2336	9	FLAYILFTR	netmhcpa_el	0.32
1647	HLA-A*33:03	orf1ab polyprotein	5970	5978	9	IPKDMTYRR	netmhcpa_el	0.32
1648	HLA-A*33:03	orf1ab polyprotein	6809	6817	9	MPNLYKMQR	netmhcpa_el	0.32
1649	HLA-A*33:03	orf1ab polyprotein	6876	6884	9	VAPGTAVLR	netmhcpa_el	0.32

1650	HLA-A*33:03	orf1ab polyprotein	5133	5142	10	FVNEFYAYLR	netmhcpa_el	0.32
1651	HLA-A*01:01	orf1ab polyprotein	1165	1174	10	CVDTVRTNVY	Consensus (ann/smm)	0.31
1652	HLA-A*02:06	orf1ab polyprotein	5364	5373	10	KLVLSPNPYV	Consensus (ann/smm)	0.31
1653	HLA-A*02:06	orf1ab polyprotein	4726	4734	9	FVDGVPFVV	Consensus (ann/smm)	0.31
1654	HLA-A*03:01	orf1ab polyprotein	2920	2928	9	TIFKASGK	Consensus (ann/smm)	0.31
1655	HLA-A*03:01	orf1ab polyprotein	2502	2511	10	HLYFDKAGQK	Consensus (ann/smm)	0.31
1656	HLA-A*11:01	orf1ab polyprotein	807	816	10	MVTNNTFTLK	Consensus (ann/smm)	0.31
1657	HLA-A*11:01	orf1ab polyprotein	4801	4809	9	TVKPGNFNK	Consensus (ann/smm)	0.31
1658	HLA-A*11:01	orf1ab polyprotein	5005	5013	9	HLMGWDPYK	Consensus (ann/smm)	0.31
1659	HLA-A*24:02	orf1ab polyprotein	5534	5543	10	VYRGTTTYKL	Consensus (ann/smm)	0.31
1660	HLA-A*26:01	orf1ab polyprotein	1865	1873	9	DVFKYKNSY	Consensus (ann/smm)	0.31
1661	HLA-A*26:01	orf1ab polyprotein	1727	1737	11	DVRETMSYLFQ	Consensus (ann/smm)	0.31
1662	HLA-A*31:01	orf1ab polyprotein	6078	6088	11	MYKGLPWNVVR	Consensus (ann/smm)	0.31
1663	HLA-A*33:03	orf1ab polyprotein	390	398	9	ESGLKTILR	netmhcpa_el	0.31
1664	HLA-A*33:03	orf1ab polyprotein	4581	4589	9	TVQFCDAMR	netmhcpa_el	0.31
1665	HLA-A*33:03	orf1ab polyprotein	5167	5175	9	LVASIKNFK	netmhcpa_el	0.31
1666	HLA-A*33:03	orf1ab polyprotein	5268	5276	9	EYADVFLHY	netmhcpa_el	0.31
1667	HLA-A*33:03	orf1ab polyprotein	6442	6450	9	YNLWNTFTR	netmhcpa_el	0.31
1668	HLA-A*02:01	orf1ab polyprotein	1675	1683	9	YLATALLTL	Consensus (ann/comblib_sidney2008/smm)	0.3
1669	HLA-A*02:01	orf1ab polyprotein	3128	3136	9	WMVMFTPLV	Consensus (ann/comblib_sidney2008/smm)	0.3
1670	HLA-A*02:01	orf1ab polyprotein	4094	4102	9	ALWEIQQVV	Consensus (ann/comblib_sidney2008/smm)	0.3
1671	HLA-A*02:01	orf1ab polyprotein	4266	4274	9	VLSFCFAV	Consensus (ann/comblib_sidney2008/smm)	0.3
1672	HLA-A*02:01	orf1ab polyprotein	4515	4523	9	TMADLVYAL	Consensus (ann/comblib_sidney2008/smm)	0.3
1673	HLA-A*02:01	orf1ab polyprotein	6109	6117	9	VLWAHGFEL	Consensus (ann/comblib_sidney2008/smm)	0.3
1674	HLA-A*02:01	orf1ab polyprotein	6245	6253	9	ALLADKFPV	Consensus (ann/comblib_sidney2008/smm)	0.3
1675	HLA-A*02:01	orf1ab polyprotein	6419	6427	9	YLDAYNMMI	Consensus (ann/comblib_sidney2008/smm)	0.3
1676	HLA-A*02:01	orf1ab polyprotein	6749	6757	9	LLDDFVEI	Consensus (ann/comblib_sidney2008/smm)	0.3
1677	HLA-A*02:01	orf1ab polyprotein	6851	6859	9	YLNTLTLAV	Consensus (ann/comblib_sidney2008/smm)	0.3
1678	HLA-A*02:06	orf1ab polyprotein	3012	3021	10	RSLPGVFCGV	Consensus (ann/smm)	0.3

1679	HLA-A*02:06	orf1ab polyprotein	5924	5932	9	LQAENVTLGL	Consensus (ann/smm)	0.3
1680	HLA-A*03:01	orf1ab polyprotein	1875	1883	9	TTIKPVITYK	Consensus (ann/smm)	0.3
1681	HLA-A*03:01	orf1ab polyprotein	5710	5718	9	VVNARLRAK	Consensus (ann/smm)	0.3
1682	HLA-A*03:01	orf1ab polyprotein	3344	3353	10	SMQNCVLKLLK	Consensus (ann/smm)	0.3
1683	HLA-A*03:01	orf1ab polyprotein	1103	1112	10	CVLSGHNLAK	Consensus (ann/smm)	0.3
1684	HLA-A*11:01	orf1ab polyprotein	1272	1280	9	SDIDITFLK	Consensus (ann/smm)	0.3
1685	HLA-A*11:01	orf1ab polyprotein	2196	2204	9	TTIAKNTVK	Consensus (ann/smm)	0.3
1686	HLA-A*11:01	orf1ab polyprotein	6814	6822	9	KMQRMLLEK	Consensus (ann/smm)	0.3
1687	HLA-A*11:01	orf1ab polyprotein	1186	1194	9	LVSSFLEMK	Consensus (ann/smm)	0.3
1688	HLA-A*24:02	orf1ab polyprotein	1858	1867	10	EYKGPITDVF	Consensus (ann/smm)	0.3
1689	HLA-A*26:01	orf1ab polyprotein	567	576	10	ITILDGISQY	Consensus (ann/smm)	0.3
1690	HLA-A*26:01	orf1ab polyprotein	1248	1256	9	FLTENLLLY	Consensus (ann/smm)	0.3
1691	HLA-A*31:01	orf1ab polyprotein	2407	2415	9	STCMMCYKR	Consensus (ann/smm)	0.3
1692	HLA-A*31:01	orf1ab polyprotein	5647	5656	10	KYLPIDKCSR	Consensus (ann/smm)	0.3
1693	HLA-A*33:03	orf1ab polyprotein	3985	3993	9	NVAKSEFDR	netmhcpa_el	0.3
1694	HLA-A*33:03	orf1ab polyprotein	5005	5013	9	HLMGWDPYK	netmhcpa_el	0.3
1695	HLA-A*33:03	orf1ab polyprotein	5489	5497	9	LSWEVGKPR	netmhcpa_el	0.3
1696	HLA-A*33:03	orf1ab polyprotein	6097	6105	9	DTLKNLSDR	netmhcpa_el	0.3
1697	HLA-A*33:03	orf1ab polyprotein	2631	2638	8	STFISAAR	netmhcpa_el	0.3
1698	HLA-A*33:03	orf1ab polyprotein	7044	7053	10	DMSKFPLKLR	netmhcpa_el	0.3
1699	HLA-A*01:01	orf1ab polyprotein	896	905	10	DLDEWSMATY	Consensus (ann/smm)	0.29
1700	HLA-A*02:06	orf1ab polyprotein	3013	3021	9	SLPGVFCGV	Consensus (ann/smm)	0.29
1701	HLA-A*02:06	orf1ab polyprotein	3128	3136	9	WMVMFTPLV	Consensus (ann/smm)	0.29
1702	HLA-A*02:06	orf1ab polyprotein	2771	2779	9	KQLIKVTLV	Consensus (ann/smm)	0.29
1703	HLA-A*03:01	orf1ab polyprotein	676	684	9	QTFKLVNK	Consensus (ann/smm)	0.29
1704	HLA-A*03:01	orf1ab polyprotein	1504	1512	9	TISLAGSYK	Consensus (ann/smm)	0.29
1705	HLA-A*11:01	orf1ab polyprotein	6925	6933	9	IISDMYDPK	Consensus (ann/smm)	0.29
1706	HLA-A*26:01	orf1ab polyprotein	2897	2905	9	YTPSKLIEY	Consensus (ann/smm)	0.29
1707	HLA-A*26:01	orf1ab polyprotein	670	679	10	EIKESVQTF	Consensus (ann/smm)	0.29

1708	HLA-A*26:01	orf1ab polyprotein	3736	3744	9	LIISVTSNY	Consensus (ann/smm)	0.29
1709	HLA-A*26:01	orf1ab polyprotein	4370	4379	10	CTVCGMWKGY	Consensus (ann/smm)	0.29
1710	HLA-A*31:01	orf1ab polyprotein	4565	4573	9	RVYANLGER	Consensus (ann/smm)	0.29
1711	HLA-A*33:03	orf1ab polyprotein	6321	6329	9	SIVCRFDTR	netmhcpa_el	0.29
1712	HLA-A*33:03	orf1ab polyprotein	2373	2382	10	QMAPISAMVR	netmhcpa_el	0.29
1713	HLA-A*33:03	orf1ab polyprotein	4230	4239	10	FIKGLNNLNR	netmhcpa_el	0.29
1714	HLA-A*01:01	orf1ab polyprotein	2552	2561	10	SSAKSASVYY	Consensus (ann/smm)	0.28
1715	HLA-A*02:01	orf1ab polyprotein	4514	4523	10	YTMADLVYAL	Consensus (ann/smm)	0.28
1716	HLA-A*02:06	orf1ab polyprotein	4139	4147	9	LQNNELSPV	Consensus (ann/smm)	0.28
1717	HLA-A*02:06	orf1ab polyprotein	5365	5373	9	LVLSVNPYV	Consensus (ann/smm)	0.28
1718	HLA-A*03:01	orf1ab polyprotein	729	737	9	LLMPLKAPK	Consensus (ann/smm)	0.28
1719	HLA-A*03:01	orf1ab polyprotein	4130	4138	9	ALRANSVVK	Consensus (ann/smm)	0.28
1720	HLA-A*11:01	orf1ab polyprotein	2306	2315	10	TIQITISFK	Consensus (ann/smm)	0.28
1721	HLA-A*11:01	orf1ab polyprotein	5775	5784	10	TVSALVYDNK	Consensus (ann/smm)	0.28
1722	HLA-A*11:01	orf1ab polyprotein	4224	4232	9	KVKYLYFIK	Consensus (ann/smm)	0.28
1723	HLA-A*11:01	orf1ab polyprotein	4961	4969	9	RQFHQKLLK	Consensus (ann/smm)	0.28
1724	HLA-A*11:01	orf1ab polyprotein	6478	6486	9	IINNTVYTK	Consensus (ann/smm)	0.28
1725	HLA-A*24:02	orf1ab polyprotein	6978	6987	10	LYKLMGHFAW	Consensus (ann/smm)	0.28
1726	HLA-A*24:02	orf1ab polyprotein	1182	1190	9	LYDKLVSSF	Consensus (ann/smm)	0.28
1727	HLA-A*24:02	orf1ab polyprotein	2385	2394	10	IFFASFYVW	Consensus (ann/smm)	0.28
1728	HLA-A*26:01	orf1ab polyprotein	1394	1402	9	ETKAIVSTI	Consensus (ann/smm)	0.28
1729	HLA-A*31:01	orf1ab polyprotein	5118	5125	8	RLYECLYR	ann	0.28
1730	HLA-A*31:01	orf1ab polyprotein	4841	4849	9	AISDYDYR	Consensus (ann/smm)	0.28
1731	HLA-A*33:03	orf1ab polyprotein	65	73	9	EQPYVFIKR	netmhcpa_el	0.28
1732	HLA-A*33:03	orf1ab polyprotein	571	579	9	DGISQYSLR	netmhcpa_el	0.28
1733	HLA-A*33:03	orf1ab polyprotein	1558	1566	9	TLLSLREVR	netmhcpa_el	0.28
1734	HLA-A*33:03	orf1ab polyprotein	3259	3267	9	SAVLQSGFR	netmhcpa_el	0.28
1735	HLA-A*33:03	orf1ab polyprotein	2002	2011	10	TYKPNTWCIR	netmhcpa_el	0.28
1736	HLA-A*33:03	orf1ab polyprotein	2717	2726	10	DFMSLSEQLR	netmhcpa_el	0.28

1737	HLA-A*33:03	orf1ab polyprotein	4840	4849	10	AAISDYDYR	netmhcpa_el	0.28
1738	HLA-A*33:03	orf1ab polyprotein	4938	4947	10	YAISAKNRAR	netmhcpa_el	0.28
1739	HLA-A*33:03	orf1ab polyprotein	6667	6676	10	ELAMDEFIER	netmhcpa_el	0.28
1740	HLA-A*03:01	orf1ab polyprotein	4168	4176	9	ALAYYNTTK	Consensus (ann/smm)	0.27
1741	HLA-A*03:01	orf1ab polyprotein	728	737	10	GLLMPLKAPK	Consensus (ann/smm)	0.27
1742	HLA-A*03:01	orf1ab polyprotein	121	129	9	VLLRKNGNK	Consensus (ann/smm)	0.27
1743	HLA-A*03:01	orf1ab polyprotein	3392	3400	9	AMRPNFTIK	Consensus (ann/smm)	0.27
1744	HLA-A*03:01	orf1ab polyprotein	2914	2923	10	VLAAECTIFK	Consensus (ann/smm)	0.27
1745	HLA-A*03:01	orf1ab polyprotein	4752	4761	10	NLHSSRLSFK	Consensus (ann/smm)	0.27
1746	HLA-A*11:01	orf1ab polyprotein	4029	4039	11	MQTMLFTMLRK	Consensus (ann/smm)	0.27
1747	HLA-A*11:01	orf1ab polyprotein	2345	2353	9	AIMQLFFSY	Consensus (ann/smm)	0.27
1748	HLA-A*11:01	orf1ab polyprotein	2499	2507	9	GSIHLYFDK	Consensus (ann/smm)	0.27
1749	HLA-A*11:01	orf1ab polyprotein	2405	2414	10	NSSTCMMCYK	Consensus (ann/smm)	0.27
1750	HLA-A*11:01	orf1ab polyprotein	282	290	9	KTIQPRVEK	Consensus (ann/smm)	0.27
1751	HLA-A*11:01	orf1ab polyprotein	5978	5986	9	RLISMMGFK	Consensus (ann/smm)	0.27
1752	HLA-A*24:02	orf1ab polyprotein	905	914	10	YYLFDSEGEF	Consensus (ann/smm)	0.27
1753	HLA-A*24:02	orf1ab polyprotein	4677	4686	10	RYFKYWDQTY	Consensus (ann/smm)	0.27
1754	HLA-A*26:01	orf1ab polyprotein	670	678	9	EIKESVQTF	Consensus (ann/smm)	0.27
1755	HLA-A*26:01	orf1ab polyprotein	1582	1590	9	QVVDMSMTY	Consensus (ann/smm)	0.27
1756	HLA-A*26:01	orf1ab polyprotein	2456	2464	9	DTEFCAGSTF	Consensus (ann/smm)	0.27
1757	HLA-A*26:01	orf1ab polyprotein	5251	5259	9	FVSLAIDAY	Consensus (ann/smm)	0.27
1758	HLA-A*26:01	orf1ab polyprotein	5286	5295	10	ELTGHMLDMY	Consensus (ann/smm)	0.27
1759	HLA-A*33:03	orf1ab polyprotein	4565	4573	9	RVYANLGER	netmhcpa_el	0.27
1760	HLA-A*33:03	orf1ab polyprotein	1154	1163	10	FGADPIHSLR	netmhcpa_el	0.27
1761	HLA-A*33:03	orf1ab polyprotein	1309	1318	10	TTEMLAKALR	netmhcpa_el	0.27
1762	HLA-A*33:03	orf1ab polyprotein	2462	2471	10	STFISDEVAR	netmhcpa_el	0.27
1763	HLA-A*33:03	orf1ab polyprotein	3154	3163	10	YWFFSNYLKR	netmhcpa_el	0.27
1764	HLA-A*33:03	orf1ab polyprotein	4556	4565	10	DFVENPDILR	netmhcpa_el	0.27
1765	HLA-A*33:03	orf1ab polyprotein	6504	6513	10	NVAFELWAKR	netmhcpa_el	0.27

1766	HLA-A*02:01	orf1ab polyprotein	3085	3093	9	FLMSFTVLC	Consensus (ann/comblib_sidney2008/smm)	0.26
1767	HLA-A*02:06	orf1ab polyprotein	4265	4274	10	TVLSFCAFAV	Consensus (ann/smm)	0.26
1768	HLA-A*02:06	orf1ab polyprotein	1083	1091	9	MQVESDDYI	Consensus (ann/smm)	0.26
1769	HLA-A*02:06	orf1ab polyprotein	1804	1812	9	FVMMSAPPA	Consensus (ann/smm)	0.26
1770	HLA-A*02:06	orf1ab polyprotein	4514	4522	9	YTMADLVYA	Consensus (ann/smm)	0.26
1771	HLA-A*03:01	orf1ab polyprotein	4673	4681	9	KLFDRYFKY	Consensus (ann/smm)	0.26
1772	HLA-A*11:01	orf1ab polyprotein	1271	1280	10	VSDIDITFLK	Consensus (ann/smm)	0.26
1773	HLA-A*11:01	orf1ab polyprotein	3711	3720	10	LMNVLTLYK	Consensus (ann/smm)	0.26
1774	HLA-A*11:01	orf1ab polyprotein	1504	1512	9	TISLAGSYK	Consensus (ann/smm)	0.26
1775	HLA-A*24:02	orf1ab polyprotein	6435	6444	10	VYKQFDYNL	Consensus (ann/smm)	0.26
1776	HLA-A*24:02	orf1ab polyprotein	2300	2309	10	TYPESLETIQI	Consensus (ann/smm)	0.26
1777	HLA-A*26:01	orf1ab polyprotein	328	336	9	ETSWQTGDF	Consensus (ann/smm)	0.26
1778	HLA-A*26:01	orf1ab polyprotein	3076	3085	10	HVVAFNLLF	Consensus (ann/smm)	0.26
1779	HLA-A*26:01	orf1ab polyprotein	709	717	9	FVTHSKGLY	Consensus (ann/smm)	0.26
1780	HLA-A*26:01	orf1ab polyprotein	3089	3098	10	FTVLCLTPVY	Consensus (ann/smm)	0.26
1781	HLA-A*31:01	orf1ab polyprotein	4009	4017	9	MTQMYKQAR	Consensus (ann/smm)	0.26
1782	HLA-A*33:03	orf1ab polyprotein	2140	2148	9	NYAKPFLNK	netmhcpa_el	0.26
1783	HLA-A*33:03	orf1ab polyprotein	6195	6203	9	ASCDAIMTR	netmhcpa_el	0.26
1784	HLA-A*33:03	orf1ab polyprotein	3653	3662	10	VYMPASWVMR	netmhcpa_el	0.26
1785	HLA-A*33:03	orf1ab polyprotein	4501	4510	10	DMVPHISRQR	netmhcpa_el	0.26
1786	HLA-A*01:01	orf1ab polyprotein	1248	1256	9	FLTENLLLY	Consensus (ann/smm)	0.25
1787	HLA-A*01:01	orf1ab polyprotein	6667	6677	11	ELAMDEFIERY	Consensus (ann/smm)	0.25
1788	HLA-A*02:01	orf1ab polyprotein	2347	2356	10	MQLFFSYFAV	Consensus (ann/smm)	0.25
1789	HLA-A*02:06	orf1ab polyprotein	1291	1299	9	VQEGVLTAV	Consensus (ann/smm)	0.25
1790	HLA-A*24:02	orf1ab polyprotein	3114	3122	9	FYLTDVVSF	Consensus (ann/smm)	0.25
1791	HLA-A*26:01	orf1ab polyprotein	4926	4934	9	NVIPTITQM	Consensus (ann/smm)	0.25
1792	HLA-A*26:01	orf1ab polyprotein	4421	4430	10	DVVYRAFDIY	Consensus (ann/smm)	0.25
1793	HLA-A*33:03	orf1ab polyprotein	5822	5831	10	EFLTRNPAWR	netmhcpa_el	0.25
1794	HLA-A*01:01	orf1ab polyprotein	3709	3719	11	WTLMNVLTLYV	Consensus (ann/smm)	0.24

1795	HLA-A*02:06	orf1ab polyprotein	6077	6086	10	LMYKGLPWNV	Consensus (ann/smm)	0.24
1796	HLA-A*02:06	orf1ab polyprotein	6160	6169	10	YVYNPFMIDV	Consensus (ann/smm)	0.24
1797	HLA-A*03:01	orf1ab polyprotein	5059	5068	10	VMCGSGLYVK	Consensus (ann/smm)	0.24
1798	HLA-A*03:01	orf1ab polyprotein	808	816	9	VTNNTFTLK	Consensus (ann/smm)	0.24
1799	HLA-A*03:01	orf1ab polyprotein	6699	6708	10	GLHLLIGLAK	Consensus (ann/smm)	0.24
1800	HLA-A*24:02	orf1ab polyprotein	1634	1642	9	YYHTTDPFSF	Consensus (ann/smm)	0.24
1801	HLA-A*24:02	orf1ab polyprotein	7035	7043	9	IQLSSYSLF	Consensus (ann/smm)	0.24
1802	HLA-A*24:02	orf1ab polyprotein	181	190	10	AYTRYVDNNF	Consensus (ann/smm)	0.24
1803	HLA-A*24:02	orf1ab polyprotein	5540	5549	10	TYKLNVDGYF	Consensus (ann/smm)	0.24
1804	HLA-A*24:02	orf1ab polyprotein	2382	2390	9	RMYYIFFASF	Consensus (ann/smm)	0.24
1805	HLA-A*26:01	orf1ab polyprotein	3355	3364	10	DTANPKTPKY	Consensus (ann/smm)	0.24
1806	HLA-A*31:01	orf1ab polyprotein	634	643	10	KFKEGVEFLR	Consensus (ann/smm)	0.24
1807	HLA-A*31:01	orf1ab polyprotein	3796	3805	10	LFCLLNRYFR	Consensus (ann/smm)	0.24
1808	HLA-A*33:03	orf1ab polyprotein	2155	2163	9	NIVTRCLNR	netmhcpa_el	0.24
1809	HLA-A*33:03	orf1ab polyprotein	3060	3068	9	LAYYFMRFR	netmhcpa_el	0.24
1810	HLA-A*33:03	orf1ab polyprotein	3813	3821	9	YLVSTQEFR	netmhcpa_el	0.24
1811	HLA-A*33:03	orf1ab polyprotein	4417	4425	9	GTSTDVVYR	netmhcpa_el	0.24
1812	HLA-A*33:03	orf1ab polyprotein	5910	5918	9	QFTSLEIPR	netmhcpa_el	0.24
1813	HLA-A*33:03	orf1ab polyprotein	2809	2818	10	YKAIDGGVTR	netmhcpa_el	0.24
1814	HLA-A*01:01	orf1ab polyprotein	241	249	9	YTERSEKSY	Consensus (ann/smm)	0.23
1815	HLA-A*01:01	orf1ab polyprotein	2092	2100	9	HTDLMAAYV	Consensus (ann/smm)	0.23
1816	HLA-A*01:01	orf1ab polyprotein	7031	7040	10	NTNPIQLSSY	Consensus (ann/smm)	0.23
1817	HLA-A*02:01	orf1ab polyprotein	3082	3091	10	TLLFLMSFTV	Consensus (ann/smm)	0.23
1818	HLA-A*02:06	orf1ab polyprotein	4252	4260	9	LQAGNATEV	Consensus (ann/smm)	0.23
1819	HLA-A*02:06	orf1ab polyprotein	5246	5254	9	LMIERFVSL	Consensus (ann/smm)	0.23
1820	HLA-A*02:06	orf1ab polyprotein	860	868	9	YTVELGTEV	Consensus (ann/smm)	0.23
1821	HLA-A*03:01	orf1ab polyprotein	116	125	10	VAYRKVLLRK	Consensus (ann/smm)	0.23
1822	HLA-A*03:01	orf1ab polyprotein	1185	1194	10	KLVSSFLEMK	Consensus (ann/smm)	0.23
1823	HLA-A*03:01	orf1ab polyprotein	2076	2085	10	ILKPANNSLK	Consensus (ann/smm)	0.23

1824	HLA-A*03:01	orf1ab polyprotein	4716	4724	9	TSFGPLVRK	Consensus (ann/smm)	0.23
1825	HLA-A*11:01	orf1ab polyprotein	3260	3268	9	AVLQSGFRK	Consensus (ann/smm)	0.23
1826	HLA-A*11:01	orf1ab polyprotein	2822	2830	9	STDTCFANK	Consensus (ann/smm)	0.23
1827	HLA-A*24:02	orf1ab polyprotein	6294	6302	9	SYATHSDKF	Consensus (ann/smm)	0.23
1828	HLA-A*24:02	orf1ab polyprotein	2512	2521	10	TYERHLSHF	Consensus (ann/smm)	0.23
1829	HLA-A*24:02	orf1ab polyprotein	2560	2569	10	YSQLMCQPI	Consensus (ann/smm)	0.23
1830	HLA-A*24:02	orf1ab polyprotein	3009	3018	10	DYYRSLPGVF	Consensus (ann/smm)	0.23
1831	HLA-A*24:02	orf1ab polyprotein	6159	6167	9	DYVYNPFMI	Consensus (ann/smm)	0.23
1832	HLA-A*26:01	orf1ab polyprotein	3055	3063	9	IVVTCLAYY	Consensus (ann/smm)	0.23
1833	HLA-A*26:01	orf1ab polyprotein	3106	3114	9	SVIYLYLTF	Consensus (ann/smm)	0.23
1834	HLA-A*26:01	orf1ab polyprotein	2495	2504	10	TVKNGSIHLY	Consensus (ann/smm)	0.23
1835	HLA-A*26:01	orf1ab polyprotein	176	185	10	ELNGGAYTRY	Consensus (ann/smm)	0.23
1836	HLA-A*31:01	orf1ab polyprotein	5023	5032	10	RIMASLVLAR	Consensus (ann/smm)	0.23
1837	HLA-A*31:01	orf1ab polyprotein	5037	5046	10	CCSLSHRFYR	Consensus (ann/smm)	0.23
1838	HLA-A*31:01	orf1ab polyprotein	6121	6130	10	KYFVKIGPER	Consensus (ann/smm)	0.23
1839	HLA-A*31:01	orf1ab polyprotein	2409	2417	9	CMMCYKRNR	Consensus (ann/smm)	0.23
1840	HLA-A*01:01	orf1ab polyprotein	6669	6677	9	AMDEFIERY	Consensus (ann/smm)	0.22
1841	HLA-A*01:01	orf1ab polyprotein	487	496	10	FVETVKGLDY	Consensus (ann/smm)	0.22
1842	HLA-A*01:01	orf1ab polyprotein	1891	1900	10	EIDPKLDNYY	Consensus (ann/smm)	0.22
1843	HLA-A*02:06	orf1ab polyprotein	3710	3718	9	TLMNVLTIV	Consensus (ann/smm)	0.22
1844	HLA-A*24:02	orf1ab polyprotein	3104	3112	9	VYSVIYLYL	Consensus (ann/smm)	0.22
1845	HLA-A*26:01	orf1ab polyprotein	3903	3911	9	DTTEAFEKM	Consensus (ann/smm)	0.22
1846	HLA-A*33:03	orf1ab polyprotein	3654	3662	9	YMPASWVMR	netmhcpa_el	0.22
1847	HLA-A*01:01	orf1ab polyprotein	5464	5473	10	ATEETFKLSY	Consensus (ann/smm)	0.21
1848	HLA-A*01:01	orf1ab polyprotein	5772	5781	10	IVDTVSALVY	Consensus (ann/smm)	0.21
1849	HLA-A*02:06	orf1ab polyprotein	6749	6757	9	LLDDFVEI	Consensus (ann/smm)	0.21
1850	HLA-A*02:06	orf1ab polyprotein	2780	2789	10	FLFVAIFYL	Consensus (ann/smm)	0.21
1851	HLA-A*02:06	orf1ab polyprotein	6365	6373	9	KQLPFFYYS	Consensus (ann/smm)	0.21
1852	HLA-A*02:06	orf1ab polyprotein	6695	6703	9	SQLGGLHLL	Consensus (ann/smm)	0.21

1853	HLA-A*03:01	orf1ab polyprotein	4892	4900	9	KSAGFPFNK	Consensus (ann/smm)	0.21
1854	HLA-A*03:01	orf1ab polyprotein	2600	2610	11	STFNVPMEKLLK	Consensus (ann/smm)	0.21
1855	HLA-A*11:01	orf1ab polyprotein	1057	1066	10	VVNAANVYLK	Consensus (ann/smm)	0.21
1856	HLA-A*11:01	orf1ab polyprotein	5533	5542	10	VVYRGTTTYK	Consensus (ann/smm)	0.21
1857	HLA-A*11:01	orf1ab polyprotein	2406	2414	9	SSTCMMCYK	Consensus (ann/smm)	0.21
1858	HLA-A*11:01	orf1ab polyprotein	6668	6678	11	LAMDEFIERYK	Consensus (ann/smm)	0.21
1859	HLA-A*11:01	orf1ab polyprotein	6117	6125	9	LTSMKYFVK	Consensus (ann/smm)	0.21
1860	HLA-A*24:02	orf1ab polyprotein	3821	3829	9	RYMNSQGLL	Consensus (ann/smm)	0.21
1861	HLA-A*26:01	orf1ab polyprotein	5689	5697	9	ETTADIVVF	Consensus (ann/smm)	0.21
1862	HLA-A*31:01	orf1ab polyprotein	419	426	8	KCAYWVPR	ann	0.21
1863	HLA-A*33:03	orf1ab polyprotein	1155	1163	9	GADPIHSLR	netmhcpa_el	0.21
1864	HLA-A*33:03	orf1ab polyprotein	6701	6709	9	HLLIGLAKR	netmhcpa_el	0.21
1865	HLA-A*33:03	orf1ab polyprotein	68	77	10	YVFIKRSAR	netmhcpa_el	0.21
1866	HLA-A*33:03	orf1ab polyprotein	5705	5714	10	NYDLSVNNAR	netmhcpa_el	0.21
1867	HLA-A*01:01	orf1ab polyprotein	2323	2331	9	LVAEWFLAY	Consensus (ann/smm)	0.2
1868	HLA-A*01:01	orf1ab polyprotein	2405	2413	9	NSSTCMMCY	Consensus (ann/smm)	0.2
1869	HLA-A*01:01	orf1ab polyprotein	3711	3719	9	LMNVLTLYV	Consensus (ann/smm)	0.2
1870	HLA-A*01:01	orf1ab polyprotein	5287	5295	9	LTGHMLDMY	Consensus (ann/smm)	0.2
1871	HLA-A*01:01	orf1ab polyprotein	3308	3317	10	TSEDMLNPNY	Consensus (ann/smm)	0.2
1872	HLA-A*02:01	orf1ab polyprotein	2332	2340	9	ILFTRFFYV	Consensus (ann/comblib_sidney2008/smm)	0.2
1873	HLA-A*02:01	orf1ab polyprotein	2363	2371	9	WLMWLIINL	Consensus (ann/comblib_sidney2008/smm)	0.2
1874	HLA-A*02:01	orf1ab polyprotein	2364	2372	9	LMWLIINLV	Consensus (ann/comblib_sidney2008/smm)	0.2
1875	HLA-A*02:01	orf1ab polyprotein	3083	3091	9	LLFLMSFTV	Consensus (ann/comblib_sidney2008/smm)	0.2
1876	HLA-A*02:01	orf1ab polyprotein	3122	3130	9	FLAHIQWMV	Consensus (ann/comblib_sidney2008/smm)	0.2
1877	HLA-A*02:01	orf1ab polyprotein	3183	3191	9	FLLNKEMYL	Consensus (ann/comblib_sidney2008/smm)	0.2
1878	HLA-A*02:01	orf1ab polyprotein	3639	3647	9	FLLPSLATV	Consensus (ann/comblib_sidney2008/smm)	0.2
1879	HLA-A*02:01	orf1ab polyprotein	3710	3718	9	TLMNVLTLYV	Consensus (ann/comblib_sidney2008/smm)	0.2
1880	HLA-A*02:01	orf1ab polyprotein	3732	3740	9	SMWALIISV	Consensus (ann/comblib_sidney2008/smm)	0.2
1881	HLA-A*02:06	orf1ab polyprotein	6659	6668	10	SQMEIDFLEL	Consensus (ann/smm)	0.2

1882	HLA-A*02:06	orf1ab polyprotein	4514	4523	10	YTMADLVYAL	Consensus (ann/smm)	0.2
1883	HLA-A*02:06	orf1ab polyprotein	4859	4867	9	RQLLFVVEV	Consensus (ann/smm)	0.2
1884	HLA-A*03:01	orf1ab polyprotein	6806	6814	9	GVAMPNLYK	Consensus (ann/smm)	0.2
1885	HLA-A*11:01	orf1ab polyprotein	5587	5595	9	SSNVANYQK	Consensus (ann/smm)	0.2
1886	HLA-A*24:02	orf1ab polyprotein	2330	2338	9	AYILFTRFF	Consensus (ann/smm)	0.2
1887	HLA-A*24:02	orf1ab polyprotein	6676	6684	9	RYKLEGYAF	Consensus (ann/smm)	0.2
1888	HLA-A*24:02	orf1ab polyprotein	3159	3167	9	NYLKRRVVF	Consensus (ann/smm)	0.2
1889	HLA-A*26:01	orf1ab polyprotein	1443	1452	10	ETLVTMPLGY	Consensus (ann/smm)	0.2
1890	HLA-A*33:03	orf1ab polyprotein	615	623	9	NIFGTVYEK	netmhcpa_el	0.2
1891	HLA-A*33:03	orf1ab polyprotein	4171	4179	9	YYNTTKGGR	netmhcpa_el	0.2
1892	HLA-A*33:03	orf1ab polyprotein	7073	7081	9	LSKGRLIIR	netmhcpa_el	0.2
1893	HLA-A*01:01	orf1ab polyprotein	221	229	9	FIDTKRGVY	Consensus (ann/smm)	0.19
1894	HLA-A*03:01	orf1ab polyprotein	1645	1654	10	RYMSALNHTK	Consensus (ann/smm)	0.19
1895	HLA-A*03:01	orf1ab polyprotein	3523	3532	10	AVLDMCASLK	Consensus (ann/smm)	0.19
1896	HLA-A*03:01	orf1ab polyprotein	7051	7061	11	KLRGTAVMSLK	Consensus (ann/smm)	0.19
1897	HLA-A*11:01	orf1ab polyprotein	2021	2029	9	TSNSFDVLK	Consensus (ann/smm)	0.19
1898	HLA-A*24:02	orf1ab polyprotein	1899	1907	9	YYKKDNSYF	Consensus (ann/smm)	0.19
1899	HLA-A*26:01	orf1ab polyprotein	4978	4987	10	TVVIGTSKFY	Consensus (ann/smm)	0.19
1900	HLA-A*31:01	orf1ab polyprotein	4402	4410	9	RVCVSAAR	Consensus (ann/smm)	0.19
1901	HLA-A*33:03	orf1ab polyprotein	4801	4809	9	TVKPGNFNK	netmhcpa_el	0.19
1902	HLA-A*01:01	orf1ab polyprotein	4867	4875	9	VVDKYFDCY	Consensus (ann/smm)	0.18
1903	HLA-A*02:01	orf1ab polyprotein	3731	3740	10	ISMWALIISV	Consensus (ann/smm)	0.18
1904	HLA-A*02:01	orf1ab polyprotein	5058	5067	10	MVMCGGSLYV	Consensus (ann/smm)	0.18
1905	HLA-A*02:06	orf1ab polyprotein	6382	6391	10	KQVVSIDYV	Consensus (ann/smm)	0.18
1906	HLA-A*02:06	orf1ab polyprotein	2347	2355	9	MQLFFSYFA	Consensus (ann/smm)	0.18
1907	HLA-A*02:06	orf1ab polyprotein	3369	3377	9	IQPGQTFVS	Consensus (ann/smm)	0.18
1908	HLA-A*03:01	orf1ab polyprotein	6814	6822	9	KMQRMLLEK	Consensus (ann/smm)	0.18
1909	HLA-A*03:01	orf1ab polyprotein	5386	5395	10	QLYLGGMSYY	Consensus (ann/smm)	0.18
1910	HLA-A*11:01	orf1ab polyprotein	676	684	9	QTFFKLVNK	Consensus (ann/smm)	0.18

1911	HLA-A*11:01	orf1ab polyprotein	5791	5801	11	KSAQCFKMFYK	Consensus (ann/smm)	0.18
1912	HLA-A*11:01	orf1ab polyprotein	1772	1781	10	GTLSYEQFKK	Consensus (ann/smm)	0.18
1913	HLA-A*11:01	orf1ab polyprotein	1874	1883	10	TTTIKPVTYK	Consensus (ann/smm)	0.18
1914	HLA-A*24:02	orf1ab polyprotein	3108	3116	9	IYLYLTFYL	Consensus (ann/smm)	0.18
1915	HLA-A*24:02	orf1ab polyprotein	4628	4636	9	SYSSLMPI	Consensus (ann/smm)	0.18
1916	HLA-A*24:02	orf1ab polyprotein	6422	6431	10	AYNMMISAGF	Consensus (ann/smm)	0.18
1917	HLA-A*24:02	orf1ab polyprotein	6148	6158	11	TYACWHHSIGF	Consensus (ann/smm)	0.18
1918	HLA-A*26:01	orf1ab polyprotein	4071	4080	10	MVVIPDYNTY	Consensus (ann/smm)	0.18
1919	HLA-A*31:01	orf1ab polyprotein	3360	3368	9	KTPKYKFVR	Consensus (ann/smm)	0.18
1920	HLA-A*31:01	orf1ab polyprotein	7021	7030	10	VMHANYIFWR	Consensus (ann/smm)	0.18
1921	HLA-A*33:03	orf1ab polyprotein	1945	1953	9	TGYKKPASR	netmhcpa_el	0.18
1922	HLA-A*33:03	orf1ab polyprotein	5876	5884	9	TAHSCNVNR	netmhcpa_el	0.18
1923	HLA-A*33:03	orf1ab polyprotein	6015	6023	9	DVEGCHATR	netmhcpa_el	0.18
1924	HLA-A*01:01	orf1ab polyprotein	1827	1836	10	YTGNYQCGHY	Consensus (ann/smm)	0.17
1925	HLA-A*01:01	orf1ab polyprotein	5856	5865	10	TVDSSQGSEY	Consensus (ann/smm)	0.17
1926	HLA-A*01:01	orf1ab polyprotein	3945	3954	10	ASEFSSLPSY	Consensus (ann/smm)	0.17
1927	HLA-A*02:01	orf1ab polyprotein	7041	7050	10	SLFDMSKFPL	Consensus (ann/smm)	0.17
1928	HLA-A*02:06	orf1ab polyprotein	3122	3130	9	FLAHIQWMV	Consensus (ann/smm)	0.17
1929	HLA-A*02:06	orf1ab polyprotein	2782	2790	9	FVAEIFYLI	Consensus (ann/smm)	0.17
1930	HLA-A*03:01	orf1ab polyprotein	1768	1776	9	VMYMGTLISY	Consensus (ann/smm)	0.17
1931	HLA-A*03:01	orf1ab polyprotein	4671	4680	10	RLKLFDRYFK	Consensus (ann/smm)	0.17
1932	HLA-A*03:01	orf1ab polyprotein	3179	3187	9	ALCTFLLNK	Consensus (ann/smm)	0.17
1933	HLA-A*03:01	orf1ab polyprotein	2600	2608	9	STFNVPMEK	Consensus (ann/smm)	0.17
1934	HLA-A*03:01	orf1ab polyprotein	1767	1776	10	AVMYMGTLISY	Consensus (ann/smm)	0.17
1935	HLA-A*11:01	orf1ab polyprotein	2191	2200	10	KASMPPTIAK	Consensus (ann/smm)	0.17
1936	HLA-A*11:01	orf1ab polyprotein	3179	3187	9	ALCTFLLNK	Consensus (ann/smm)	0.17
1937	HLA-A*11:01	orf1ab polyprotein	4030	4038	9	QTMLFTMLR	Consensus (ann/smm)	0.17
1938	HLA-A*11:01	orf1ab polyprotein	6625	6633	9	KTQFNYYKK	Consensus (ann/smm)	0.17
1939	HLA-A*11:01	orf1ab polyprotein	4031	4039	9	TMLFTMLRK	Consensus (ann/smm)	0.17

1940	HLA-A*24:02	orf1ab polyprotein	900	908	9	WSMATYYLF	Consensus (ann/smm)	0.17
1941	HLA-A*24:02	orf1ab polyprotein	2386	2394	9	FFASFYYVW	Consensus (ann/smm)	0.17
1942	HLA-A*24:02	orf1ab polyprotein	3010	3018	9	YYRSLPGVF	Consensus (ann/smm)	0.17
1943	HLA-A*24:02	orf1ab polyprotein	3684	3692	9	MYASAVVLL	Consensus (ann/smm)	0.17
1944	HLA-A*24:02	orf1ab polyprotein	3684	3693	10	MYASAVLLI	Consensus (ann/smm)	0.17
1945	HLA-A*26:01	orf1ab polyprotein	5271	5279	9	DVFHLYLQY	Consensus (ann/smm)	0.17
1946	HLA-A*26:01	orf1ab polyprotein	5615	5623	9	FAIGLALYY	Consensus (ann/smm)	0.17
1947	HLA-A*26:01	orf1ab polyprotein	5771	5779	9	EIVDTVSAL	Consensus (ann/smm)	0.17
1948	HLA-A*26:01	orf1ab polyprotein	5057	5066	10	EMVMCGGSLY	Consensus (ann/smm)	0.17
1949	HLA-A*26:01	orf1ab polyprotein	5268	5276	9	EYADVHLY	Consensus (ann/smm)	0.17
1950	HLA-A*26:01	orf1ab polyprotein	1481	1489	9	DAVTAYNGY	Consensus (ann/smm)	0.17
1951	HLA-A*31:01	orf1ab polyprotein	542	550	9	RVVRSIFSR	Consensus (ann/smm)	0.17
1952	HLA-A*31:01	orf1ab polyprotein	3060	3068	9	LAYYFMRFR	Consensus (ann/smm)	0.17
1953	HLA-A*33:03	orf1ab polyprotein	1637	1645	9	TTDPSFLGR	netmhcpa_el	0.17
1954	HLA-A*33:03	orf1ab polyprotein	2600	2608	9	STFNVPMEK	netmhcpa_el	0.17
1955	HLA-A*33:03	orf1ab polyprotein	3156	3164	9	FFSNYLKRR	netmhcpa_el	0.17
1956	HLA-A*33:03	orf1ab polyprotein	4953	4961	9	SICSTMTNR	netmhcpa_el	0.17
1957	HLA-A*33:03	orf1ab polyprotein	5024	5032	9	IMASLVLAR	netmhcpa_el	0.17
1958	HLA-A*33:03	orf1ab polyprotein	5619	5627	9	LALYYPSAR	netmhcpa_el	0.17
1959	HLA-A*33:03	orf1ab polyprotein	162	171	10	NTKHSSGVTR	netmhcpa_el	0.17
1960	HLA-A*33:03	orf1ab polyprotein	1636	1645	10	HTTDPFLGR	netmhcpa_el	0.17
1961	HLA-A*33:03	orf1ab polyprotein	6441	6450	10	TYNLWNTFTR	netmhcpa_el	0.17
1962	HLA-A*03:01	orf1ab polyprotein	1104	1112	9	VLSGHNLAK	Consensus (ann/smm)	0.16
1963	HLA-A*03:01	orf1ab polyprotein	4961	4969	9	RQFHQKLLK	Consensus (ann/smm)	0.16
1964	HLA-A*03:01	orf1ab polyprotein	3183	3192	10	FLLNKEMYLK	Consensus (ann/smm)	0.16
1965	HLA-A*03:01	orf1ab polyprotein	5391	5400	10	GMSYYCKSHK	Consensus (ann/smm)	0.16
1966	HLA-A*24:02	orf1ab polyprotein	7039	7048	10	SYSLFDM SKF	Consensus (ann/smm)	0.16
1967	HLA-A*31:01	orf1ab polyprotein	5118	5127	10	RLYECLYRNR	Consensus (ann/smm)	0.16
1968	HLA-A*33:03	orf1ab polyprotein	1875	1883	9	TTIKPVTYK	netmhcpa_el	0.16

1969	HLA-A*33:03	orf1ab polyprotein	2630	2638	9	LSTFISAAR	netmhcpa_el	0.16
1970	HLA-A*33:03	orf1ab polyprotein	4402	4410	9	RVCGVSAAR	netmhcpa_el	0.16
1971	HLA-A*33:03	orf1ab polyprotein	6856	6864	9	TLAVPYNMR	netmhcpa_el	0.16
1972	HLA-A*33:03	orf1ab polyprotein	709	718	10	FVTHSKGLYR	netmhcpa_el	0.16
1973	HLA-A*33:03	orf1ab polyprotein	4732	4741	10	FVVSTGYHFR	netmhcpa_el	0.16
1974	HLA-A*01:01	orf1ab polyprotein	613	621	9	LTNIFGTVY	Consensus (ann/smm)	0.15
1975	HLA-A*01:01	orf1ab polyprotein	4198	4206	9	KSDGTGTIY	Consensus (ann/smm)	0.15
1976	HLA-A*02:01	orf1ab polyprotein	2363	2372	10	WLMWLIINLV	Consensus (ann/smm)	0.15
1977	HLA-A*02:01	orf1ab polyprotein	3635	3644	10	FLCLFLLPSL	Consensus (ann/smm)	0.15
1978	HLA-A*03:01	orf1ab polyprotein	1387	1396	10	KLMPVCVETK	Consensus (ann/smm)	0.15
1979	HLA-A*11:01	orf1ab polyprotein	3178	3187	10	AALCTFLLNK	Consensus (ann/smm)	0.15
1980	HLA-A*11:01	orf1ab polyprotein	4487	4495	9	AVAKHDFFK	Consensus (ann/smm)	0.15
1981	HLA-A*26:01	orf1ab polyprotein	1966	1975	10	DVVAIDYKHY	Consensus (ann/smm)	0.15
1982	HLA-A*26:01	orf1ab polyprotein	2664	2673	10	EVTGDSCNNY	Consensus (ann/smm)	0.15
1983	HLA-A*31:01	orf1ab polyprotein	3060	3069	10	LAYYFMRFR	Consensus (ann/smm)	0.15
1984	HLA-A*33:03	orf1ab polyprotein	542	550	9	RVVRSIFSR	netmhcpa_el	0.15
1985	HLA-A*33:03	orf1ab polyprotein	2181	2189	9	TFTRSTNSR	netmhcpa_el	0.15
1986	HLA-A*33:03	orf1ab polyprotein	4917	4925	9	DALFAYTKR	netmhcpa_el	0.15
1987	HLA-A*33:03	orf1ab polyprotein	6206	6214	9	AVHECFVKR	netmhcpa_el	0.15
1988	HLA-A*02:01	orf1ab polyprotein	3620	3629	10	AMSAFAMMFV	Consensus (ann/smm)	0.14
1989	HLA-A*02:06	orf1ab polyprotein	5058	5067	10	MVMCGGSLYV	Consensus (ann/smm)	0.14
1990	HLA-A*11:01	orf1ab polyprotein	1176	1185	10	AVFDKNLYDK	Consensus (ann/smm)	0.14
1991	HLA-A*11:01	orf1ab polyprotein	4072	4081	10	VVIPDYNTYK	Consensus (ann/smm)	0.14
1992	HLA-A*11:01	orf1ab polyprotein	4433	4442	10	KVAGFAKFLK	Consensus (ann/smm)	0.14
1993	HLA-A*11:01	orf1ab polyprotein	829	837	9	TVIEVQGYK	Consensus (ann/smm)	0.14
1994	HLA-A*11:01	orf1ab polyprotein	1520	1529	10	STQLGIEFLK	Consensus (ann/smm)	0.14
1995	HLA-A*11:01	orf1ab polyprotein	6623	6632	10	AVKTQFNYYK	Consensus (ann/smm)	0.14
1996	HLA-A*11:01	orf1ab polyprotein	4958	4966	9	MTNRQFHQK	Consensus (ann/smm)	0.14
1997	HLA-A*24:02	orf1ab polyprotein	1919	1928	10	PYPNASFDNF	Consensus (ann/smm)	0.14

1998	HLA-A*24:02	orf1ab polyprotein	5080	5088	9	AYANSVFNI	Consensus (ann/smm)	0.14
1999	HLA-A*26:01	orf1ab polyprotein	2132	2141	10	SVPWDTIANY	Consensus (ann/smm)	0.14
2000	HLA-A*33:03	orf1ab polyprotein	69	77	9	VFIKRSDAR	netmhcpa_el	0.14
2001	HLA-A*33:03	orf1ab polyprotein	5038	5046	9	CSLSHRFYR	netmhcpa_el	0.14
2002	HLA-A*01:01	orf1ab polyprotein	3241	3250	10	FSNSGSDVLY	Consensus (ann/smm)	0.13
2003	HLA-A*01:01	orf1ab polyprotein	5381	5389	9	VTDVTQLYL	Consensus (ann/smm)	0.13
2004	HLA-A*02:01	orf1ab polyprotein	1248	1257	10	FLTENLLLYI	Consensus (ann/smm)	0.13
2005	HLA-A*02:01	orf1ab polyprotein	2225	2234	10	KLINIIWFL	Consensus (ann/smm)	0.13
2006	HLA-A*02:01	orf1ab polyprotein	6077	6086	10	LMYKGLPWNV	Consensus (ann/smm)	0.13
2007	HLA-A*02:01	orf1ab polyprotein	5364	5373	10	KLVLSPNPYV	Consensus (ann/smm)	0.13
2008	HLA-A*02:06	orf1ab polyprotein	2884	2892	9	FLPRVFSAV	Consensus (ann/smm)	0.13
2009	HLA-A*02:06	orf1ab polyprotein	2347	2356	10	MQLFFSYFAV	Consensus (ann/smm)	0.13
2010	HLA-A*02:06	orf1ab polyprotein	4241	4250	10	MVLGSLAATV	Consensus (ann/smm)	0.13
2011	HLA-A*03:01	orf1ab polyprotein	3711	3720	10	LMNVLTLYYK	Consensus (ann/smm)	0.13
2012	HLA-A*03:01	orf1ab polyprotein	4030	4039	10	QTMLFTMLRK	Consensus (ann/smm)	0.13
2013	HLA-A*03:01	orf1ab polyprotein	807	816	10	MVTNNTFTLK	Consensus (ann/smm)	0.13
2014	HLA-A*03:01	orf1ab polyprotein	3178	3187	10	AALCTFLNKK	Consensus (ann/smm)	0.13
2015	HLA-A*11:01	orf1ab polyprotein	483	492	10	STSAFVETVK	Consensus (ann/smm)	0.13
2016	HLA-A*24:02	orf1ab polyprotein	2002	2010	9	TYKPNTWCI	Consensus (ann/smm)	0.13
2017	HLA-A*24:02	orf1ab polyprotein	3606	3614	9	LYENAFLPF	Consensus (ann/smm)	0.13
2018	HLA-A*24:02	orf1ab polyprotein	2593	2602	10	AYVNTFSSTF	Consensus (ann/smm)	0.13
2019	HLA-A*24:02	orf1ab polyprotein	3388	3397	10	VYQCAMRPNF	Consensus (ann/smm)	0.13
2020	HLA-A*24:02	orf1ab polyprotein	7019	7028	10	GYVMHANYIF	Consensus (ann/smm)	0.13
2021	HLA-A*24:02	orf1ab polyprotein	4460	4469	10	SYFVVKRHTF	Consensus (ann/smm)	0.13
2022	HLA-A*26:01	orf1ab polyprotein	2468	2477	10	EVARDLSLQF	Consensus (ann/smm)	0.13
2023	HLA-A*26:01	orf1ab polyprotein	4866	4875	10	EVVDKYFDCY	Consensus (ann/smm)	0.13
2024	HLA-A*26:01	orf1ab polyprotein	6565	6574	10	ETICAPLTVF	Consensus (ann/smm)	0.13
2025	HLA-A*26:01	orf1ab polyprotein	5058	5066	9	MVMCGGSLY	Consensus (ann/smm)	0.13
2026	HLA-A*31:01	orf1ab polyprotein	5502	5510	9	RNYVFTGYR	Consensus (ann/smm)	0.13

2027	HLA-A*31:01	orf1ab polyprotein	3061	3068	8	AYYFMRFR	ann	0.13
2028	HLA-A*33:03	orf1ab polyprotein	2810	2818	9	KAIDGGVTR	netmhcpa_el	0.13
2029	HLA-A*33:03	orf1ab polyprotein	3061	3069	9	AYYFMRFR	netmhcpa_el	0.13
2030	HLA-A*01:01	orf1ab polyprotein	4842	4850	9	ISDYDYRY	Consensus (ann/smm)	0.12
2031	HLA-A*01:01	orf1ab polyprotein	5299	5307	9	LTNDNTRY	Consensus (ann/smm)	0.12
2032	HLA-A*01:01	orf1ab polyprotein	1637	1646	10	TTDPSFLGRY	Consensus (ann/smm)	0.12
2033	HLA-A*01:01	orf1ab polyprotein	2889	2897	9	FSAVGNICY	Consensus (ann/smm)	0.12
2034	HLA-A*02:01	orf1ab polyprotein	2384	2393	10	YIFFASFYYV	Consensus (ann/smm)	0.12
2035	HLA-A*02:01	orf1ab polyprotein	3085	3094	10	FLMSFTVLCL	Consensus (ann/smm)	0.12
2036	HLA-A*02:06	orf1ab polyprotein	2332	2340	9	ILFTRFFVY	Consensus (ann/smm)	0.12
2037	HLA-A*02:06	orf1ab polyprotein	3598	3606	9	TQWSLFFFL	Consensus (ann/smm)	0.12
2038	HLA-A*02:06	orf1ab polyprotein	4089	4098	10	FTYASALWEI	Consensus (ann/smm)	0.12
2039	HLA-A*03:01	orf1ab polyprotein	5274	5282	9	HLYLQYIRK	Consensus (ann/smm)	0.12
2040	HLA-A*03:01	orf1ab polyprotein	4433	4442	10	KVAGFAKFLK	Consensus (ann/smm)	0.12
2041	HLA-A*03:01	orf1ab polyprotein	5024	5033	10	IMASLVLARK	Consensus (ann/smm)	0.12
2042	HLA-A*11:01	orf1ab polyprotein	4030	4039	10	QTMLFTMLRK	Consensus (ann/smm)	0.12
2043	HLA-A*11:01	orf1ab polyprotein	4716	4724	9	TSFGPLVRK	Consensus (ann/smm)	0.12
2044	HLA-A*11:01	orf1ab polyprotein	6806	6814	9	GVAMPNLYK	Consensus (ann/smm)	0.12
2045	HLA-A*11:01	orf1ab polyprotein	2600	2610	11	STFNVPMEKLN	Consensus (ann/smm)	0.12
2046	HLA-A*24:02	orf1ab polyprotein	4090	4098	9	TYASALWEI	Consensus (ann/smm)	0.12
2047	HLA-A*24:02	orf1ab polyprotein	1535	1544	10	VYYTSNPTTF	Consensus (ann/smm)	0.12
2048	HLA-A*24:02	orf1ab polyprotein	3062	3071	10	YYFMRFRRAF	Consensus (ann/smm)	0.12
2049	HLA-A*26:01	orf1ab polyprotein	472	480	9	EIAILASF	Consensus (ann/smm)	0.12
2050	HLA-A*26:01	orf1ab polyprotein	828	836	9	DTVIEVQGY	Consensus (ann/smm)	0.12
2051	HLA-A*26:01	orf1ab polyprotein	2323	2331	9	LVAEWFLAY	Consensus (ann/smm)	0.12
2052	HLA-A*26:01	orf1ab polyprotein	3106	3115	10	SVIYLYLTFY	Consensus (ann/smm)	0.12
2053	HLA-A*26:01	orf1ab polyprotein	1727	1735	9	DVRETMSYL	Consensus (ann/smm)	0.12
2054	HLA-A*31:01	orf1ab polyprotein	5039	5046	8	SLSHRFYR	ann	0.12
2055	HLA-A*33:03	orf1ab polyprotein	91	99	9	ELEGIQYGR	netmhcpa_el	0.12

2056	HLA-A*33:03	orf1ab polyprotein	4516	4524	9	MADLVYALR	netmhcpa_el	0.12
2057	HLA-A*33:03	orf1ab polyprotein	5759	5767	9	DMFLGTCRR	netmhcpa_el	0.12
2058	HLA-A*33:03	orf1ab polyprotein	3218	3227	10	SGAMDTTSYR	netmhcpa_el	0.12
2059	HLA-A*01:01	orf1ab polyprotein	1321	1329	9	PTDNYITTY	Consensus (ann/smm)	0.11
2060	HLA-A*01:01	orf1ab polyprotein	3437	3445	9	GTDLEGNFY	Consensus (ann/smm)	0.11
2061	HLA-A*01:01	orf1ab polyprotein	5130	5138	9	DTDFVNEFY	Consensus (ann/smm)	0.11
2062	HLA-A*02:01	orf1ab polyprotein	2331	2340	10	YILFTRFFYV	Consensus (ann/smm)	0.11
2063	HLA-A*02:06	orf1ab polyprotein	3089	3097	9	FTVLCLTPV	Consensus (ann/smm)	0.11
2064	HLA-A*02:06	orf1ab polyprotein	6032	6040	9	LQLGFSTGV	Consensus (ann/smm)	0.11
2065	HLA-A*03:01	orf1ab polyprotein	4031	4039	9	TMLFTMLRK	Consensus (ann/smm)	0.11
2066	HLA-A*03:01	orf1ab polyprotein	4905	4913	9	RLYYDSMSY	Consensus (ann/smm)	0.11
2067	HLA-A*03:01	orf1ab polyprotein	5392	5400	9	MSYYCKSHK	Consensus (ann/smm)	0.11
2068	HLA-A*03:01	orf1ab polyprotein	5455	5463	9	KLFAAETLK	Consensus (ann/smm)	0.11
2069	HLA-A*03:01	orf1ab polyprotein	5978	5986	9	RLISMMGFK	Consensus (ann/smm)	0.11
2070	HLA-A*03:01	orf1ab polyprotein	1851	1860	10	ALLTKSSEYK	Consensus (ann/smm)	0.11
2071	HLA-A*03:01	orf1ab polyprotein	3621	3630	10	MSAFAMMFVK	Consensus (ann/smm)	0.11
2072	HLA-A*03:01	orf1ab polyprotein	5533	5542	10	VVYRGTTYK	Consensus (ann/smm)	0.11
2073	HLA-A*11:01	orf1ab polyprotein	2599	2608	10	SSTFNVPMEK	Consensus (ann/smm)	0.11
2074	HLA-A*11:01	orf1ab polyprotein	3621	3630	10	MSAFAMMFVK	Consensus (ann/smm)	0.11
2075	HLA-A*11:01	orf1ab polyprotein	5792	5801	10	SAQCFKMFYK	Consensus (ann/smm)	0.11
2076	HLA-A*11:01	orf1ab polyprotein	6428	6437	10	SAGFSLWVYK	Consensus (ann/smm)	0.11
2077	HLA-A*11:01	orf1ab polyprotein	7038	7047	10	SSYSLFDMSK	Consensus (ann/smm)	0.11
2078	HLA-A*11:01	orf1ab polyprotein	808	816	9	VTNNTFTLK	Consensus (ann/smm)	0.11
2079	HLA-A*11:01	orf1ab polyprotein	1875	1883	9	TTIKPVTYK	Consensus (ann/smm)	0.11
2080	HLA-A*11:01	orf1ab polyprotein	2192	2200	9	ASMPPTIAK	Consensus (ann/smm)	0.11
2081	HLA-A*11:01	orf1ab polyprotein	3622	3630	9	SAFAMMFVK	Consensus (ann/smm)	0.11
2082	HLA-A*11:01	orf1ab polyprotein	4892	4900	9	KSAGFPFNK	Consensus (ann/smm)	0.11
2083	HLA-A*11:01	orf1ab polyprotein	5793	5801	9	AQCFKMFYK	Consensus (ann/smm)	0.11
2084	HLA-A*24:02	orf1ab polyprotein	1536	1544	9	YYTSNPPTF	Consensus (ann/smm)	0.11

2085	HLA-A*24:02	orf1ab polyprotein	3653	3661	9	VYMPASWVM	Consensus (ann/smm)	0.11
2086	HLA-A*24:02	orf1ab polyprotein	6148	6156	9	TYACWHHSI	Consensus (ann/smm)	0.11
2087	HLA-A*24:02	orf1ab polyprotein	899	908	10	EWSMATYYLF	Consensus (ann/smm)	0.11
2088	HLA-A*24:02	orf1ab polyprotein	2167	2176	10	NYMPYFFTL	Consensus (ann/smm)	0.11
2089	HLA-A*26:01	orf1ab polyprotein	4863	4871	9	FVVEVVDKY	Consensus (ann/smm)	0.11
2090	HLA-A*26:01	orf1ab polyprotein	5380	5388	9	DVTDVTQLY	Consensus (ann/smm)	0.11
2091	HLA-A*31:01	orf1ab polyprotein	3061	3069	9	AYYFMRFR	Consensus (ann/smm)	0.11
2092	HLA-A*33:03	orf1ab polyprotein	2833	2841	9	DFDTWFSQR	netmhcpa_el	0.11
2093	HLA-A*33:03	orf1ab polyprotein	4967	4975	9	LLKSIAATR	netmhcpa_el	0.11
2094	HLA-A*33:03	orf1ab polyprotein	4515	4524	10	TMADLVYALR	netmhcpa_el	0.11
2095	HLA-A*03:01	orf1ab polyprotein	2382	2391	10	RMYYFFASFY	Consensus (ann/smm)	0.1
2096	HLA-A*24:02	orf1ab polyprotein	2167	2175	9	NYMPYFFTL	Consensus (ann/smm)	0.1
2097	HLA-A*26:01	orf1ab polyprotein	1503	1511	9	ETISLAGSY	Consensus (ann/smm)	0.1
2098	HLA-A*33:03	orf1ab polyprotein	279	287	9	SIIKTIQPR	netmhcpa_el	0.1
2099	HLA-A*33:03	orf1ab polyprotein	2966	2974	9	NTYLEGSVR	netmhcpa_el	0.1
2100	HLA-A*33:03	orf1ab polyprotein	6582	6590	9	QVDLFRNAR	netmhcpa_el	0.1
2101	HLA-A*33:03	orf1ab polyprotein	2424	2432	9	TTIVNGVRR	netmhcpa_el	0.09
2102	HLA-A*33:03	orf1ab polyprotein	5471	5479	9	LSYGIATVR	netmhcpa_el	0.09
2103	HLA-A*33:03	orf1ab polyprotein	6668	6676	9	LAMDEFIER	netmhcpa_el	0.09
2104	HLA-A*33:03	orf1ab polyprotein	3990	3999	10	EFDRDAAMQR	netmhcpa_el	0.09
2105	HLA-A*33:03	orf1ab polyprotein	116	124	9	VAYRKVLLR	netmhcpa_el	0.08
2106	HLA-A*33:03	orf1ab polyprotein	1217	1225	9	ESKPSVEQR	netmhcpa_el	0.08
2107	HLA-A*33:03	orf1ab polyprotein	2151	2159	9	STTTNIVTR	netmhcpa_el	0.08
2108	HLA-A*33:03	orf1ab polyprotein	2463	2471	9	TFISDEVAR	netmhcpa_el	0.08
2109	HLA-A*33:03	orf1ab polyprotein	3155	3163	9	WFFSNYLKR	netmhcpa_el	0.08
2110	HLA-A*33:03	orf1ab polyprotein	6505	6513	9	VAFELWAKR	netmhcpa_el	0.08
2111	HLA-A*02:06	orf1ab polyprotein	2384	2393	10	YIFFASFYV	Consensus (ann/smm)	0.07
2112	HLA-A*02:06	orf1ab polyprotein	2331	2340	10	YILFTRFFV	Consensus (ann/smm)	0.07
2113	HLA-A*26:01	orf1ab polyprotein	2585	2594	10	EVAVKMFDAY	Consensus (ann/smm)	0.07

2114	HLA-A*33:03	orf1ab polyprotein	1555	1563	9	NLKTLLSLR	netmhcpa_el	0.07
2115	HLA-A*33:03	orf1ab polyprotein	2520	2528	9	HFVNLDNLR	netmhcpa_el	0.07
2116	HLA-A*33:03	orf1ab polyprotein	3553	3561	9	EFTPFDVVR	netmhcpa_el	0.07
2117	HLA-A*33:03	orf1ab polyprotein	3566	3574	9	VTFQSAVKR	netmhcpa_el	0.07
2118	HLA-A*33:03	orf1ab polyprotein	4502	4510	9	MVPHISRQR	netmhcpa_el	0.07
2119	HLA-A*33:03	orf1ab polyprotein	4841	4849	9	AISDYDYR	netmhcpa_el	0.07
2120	HLA-A*33:03	orf1ab polyprotein	6534	6542	9	NTVIWDYKR	netmhcpa_el	0.07
2121	HLA-A*33:03	orf1ab polyprotein	110	119	10	HVGEIPVAYR	netmhcpa_el	0.07
2122	HLA-A*01:01	orf1ab polyprotein	4163	4171	9	CTDDNALAY	Consensus (ann/smm)	0.06
2123	HLA-A*01:01	orf1ab polyprotein	4163	4172	10	CTDDNALAYY	Consensus (ann/smm)	0.06
2124	HLA-A*02:01	orf1ab polyprotein	2780	2789	10	FLFVAIFYL	Consensus (ann/smm)	0.06
2125	HLA-A*02:06	orf1ab polyprotein	3639	3647	9	FLLPSLATV	Consensus (ann/smm)	0.06
2126	HLA-A*11:01	orf1ab polyprotein	2600	2608	9	STFNVPMEK	Consensus (ann/smm)	0.06
2127	HLA-A*11:01	orf1ab polyprotein	6477	6486	10	SIINNTVYTK	Consensus (ann/smm)	0.06
2128	HLA-A*26:01	orf1ab polyprotein	2305	2314	10	ETIQITISSF	Consensus (ann/smm)	0.06
2129	HLA-A*31:01	orf1ab polyprotein	5038	5046	9	CSLSHRFYR	Consensus (ann/smm)	0.06
2130	HLA-A*33:03	orf1ab polyprotein	534	542	9	YAFASEAAR	netmhcpa_el	0.06
2131	HLA-A*33:03	orf1ab polyprotein	2977	2985	9	TTFDSEYCR	netmhcpa_el	0.06
2132	HLA-A*33:03	orf1ab polyprotein	3004	3012	9	WVLNNDYYR	netmhcpa_el	0.06
2133	HLA-A*33:03	orf1ab polyprotein	4009	4017	9	MTQMYKQAR	netmhcpa_el	0.06
2134	HLA-A*33:03	orf1ab polyprotein	4030	4038	9	QTMLFTMLR	netmhcpa_el	0.06
2135	HLA-A*33:03	orf1ab polyprotein	4810	4818	9	DFYDFAVSK	netmhcpa_el	0.06
2136	HLA-A*33:03	orf1ab polyprotein	5477	5485	9	TVREVLSDR	netmhcpa_el	0.06
2137	HLA-A*33:03	orf1ab polyprotein	5528	5536	9	DYGDVVYR	netmhcpa_el	0.06
2138	HLA-A*33:03	orf1ab polyprotein	3219	3227	9	GAMDTTSYR	netmhcpa_el	0.05
2139	HLA-A*33:03	orf1ab polyprotein	4187	4195	9	DLQDLKWAR	netmhcpa_el	0.05
2140	HLA-A*33:03	orf1ab polyprotein	7045	7053	9	MSKFPLKLR	netmhcpa_el	0.05
2141	HLA-A*33:03	orf1ab polyprotein	176	184	9	ELNGGAYTR	netmhcpa_el	0.04
2142	HLA-A*33:03	orf1ab polyprotein	710	718	9	VTHSKGLYR	netmhcpa_el	0.04

2143	HLA-A*33:03	orf1ab polyprotein	3699	3707	9	TVYDDGARR	netmhcpa_el	0.04
2144	HLA-A*33:03	orf1ab polyprotein	6122	6130	9	YFVKIGPER	netmhcpa_el	0.04
2145	HLA-A*33:03	orf1ab polyprotein	4733	4741	9	VVSTGYHFR	netmhcpa_el	0.02
2146	HLA-A*33:03	orf1ab polyprotein	3443	3451	9	NFYGPFVDR	netmhcpa_el	0.01
2147	HLA-A*01:01	ORF3a protein	202	211	10	VLHSYFTSDY	Consensus (ann/smm)	1
2148	HLA-A*01:01	ORF3a protein	189	197	9	YTEKWESGV	Consensus (ann/smm)	1
2149	HLA-A*03:01	ORF3a protein	51	61	11	ALLAVFQSASK	Consensus (ann/smm)	1
2150	HLA-A*01:01	ORF3a protein	220	228	9	STDTGVEHV	Consensus (ann/smm)	0.98
2151	HLA-A*24:02	ORF3a protein	112	121	10	VYFLQSINFV	Consensus (ann/smm)	0.98
2152	HLA-A*02:01	ORF3a protein	107	116	10	YLYALVYFLQ	Consensus (ann/smm)	0.97
2153	HLA-A*02:06	ORF3a protein	113	121	9	YFLQSINFV	Consensus (ann/smm)	0.97
2154	HLA-A*24:02	ORF3a protein	211	220	10	YYQLYSTQLS	Consensus (ann/smm)	0.97
2155	HLA-A*03:01	ORF3a protein	59	67	9	ASKIITLKK	Consensus (ann/smm)	0.92
2156	HLA-A*03:01	ORF3a protein	58	66	9	SASKIITLK	Consensus (ann/smm)	0.91
2157	HLA-A*01:01	ORF3a protein	146	156	11	FLCWHTNCYDY	Consensus (ann/smm)	0.9
2158	HLA-A*02:01	ORF3a protein	138	147	10	PLLYDANYFL	Consensus (ann/smm)	0.9
2159	HLA-A*02:06	ORF3a protein	56	65	10	FQSASKIITL	Consensus (ann/smm)	0.89
2160	HLA-A*03:01	ORF3a protein	126	136	11	RLWLCWKCRSK	Consensus (ann/smm)	0.89
2161	HLA-A*02:06	ORF3a protein	109	118	10	YALVYFLQSI	Consensus (ann/smm)	0.88
2162	HLA-A*24:02	ORF3a protein	206	214	9	YFTSDYYQL	Consensus (ann/smm)	0.85
2163	HLA-A*01:01	ORF3a protein	208	217	10	TSDYYQLYST	Consensus (ann/smm)	0.81
2164	HLA-A*11:01	ORF3a protein	57	66	10	QSASKIITLK	Consensus (ann/smm)	0.81
2165	HLA-A*02:01	ORF3a protein	82	90	9	NLLLLFVTV	Consensus (ann/comblib_sidney2008/smm)	0.79
2166	HLA-A*01:01	ORF3a protein	205	215	11	SYFTSDYYQLY	Consensus (ann/smm)	0.78
2167	HLA-A*31:01	ORF3a protein	113	122	10	YFLQSINFVR	Consensus (ann/smm)	0.78
2168	HLA-A*33:03	ORF3a protein	58	66	9	SASKIITLK	netmhcpa_el	0.77
2169	HLA-A*33:03	ORF3a protein	183	192	10	DYQIGGYTEK	netmhcpa_el	0.75
2170	HLA-A*24:02	ORF3a protein	140	148	9	LYDANYFLC	Consensus (ann/smm)	0.74
2171	HLA-A*31:01	ORF3a protein	125	134	10	MRLWLCWKCR	Consensus (ann/smm)	0.74

2172	HLA-A*11:01	ORF3a protein	6	16	11	RIFTIGVTLK	Consensus (ann/smm)	0.71
2173	HLA-A*31:01	ORF3a protein	118	126	9	INFVRIIMR	Consensus (ann/smm)	0.71
2174	HLA-A*02:01	ORF3a protein	45	53	9	WLIVGVALL	Consensus (ann/comblib_sidney2008/smm)	0.7
2175	HLA-A*03:01	ORF3a protein	105	113	9	FLYLYALVY	Consensus (ann/smm)	0.7
2176	HLA-A*31:01	ORF3a protein	117	126	10	SINFVRIIMR	Consensus (ann/smm)	0.7
2177	HLA-A*02:06	ORF3a protein	72	80	9	ALSKGVHFV	Consensus (ann/smm)	0.68
2178	HLA-A*24:02	ORF3a protein	159	167	9	PYNSVTSSI	Consensus (ann/smm)	0.67
2179	HLA-A*24:02	ORF3a protein	37	45	9	IQASLPFGW	Consensus (ann/smm)	0.65
2180	HLA-A*02:01	ORF3a protein	4	13	10	FMRIFTIGTV	Consensus (ann/smm)	0.61
2181	HLA-A*26:01	ORF3a protein	206	215	10	YFTSDYYQLY	Consensus (ann/smm)	0.61
2182	HLA-A*33:03	ORF3a protein	22	30	9	DATPSDFVR	netmhcpa_el	0.61
2183	HLA-A*03:01	ORF3a protein	227	235	9	HVTFFIYNK	Consensus (ann/smm)	0.6
2184	HLA-A*24:02	ORF3a protein	123	131	9	IIMRLWLCW	Consensus (ann/smm)	0.6
2185	HLA-A*24:02	ORF3a protein	108	116	9	LYALVYFLQ	Consensus (ann/smm)	0.59
2186	HLA-A*31:01	ORF3a protein	114	122	9	FLQSINFVR	Consensus (ann/smm)	0.59
2187	HLA-A*02:06	ORF3a protein	51	59	9	ALLAVFQSA	Consensus (ann/smm)	0.57
2188	HLA-A*24:02	ORF3a protein	105	114	10	FLYLYALVYF	Consensus (ann/smm)	0.56
2189	HLA-A*24:02	ORF3a protein	210	219	10	DYYQLYSTQL	Consensus (ann/smm)	0.51
2190	HLA-A*02:06	ORF3a protein	139	147	9	LLYDANYFL	Consensus (ann/smm)	0.5
2191	HLA-A*02:06	ORF3a protein	82	90	9	NLLLLFVTV	Consensus (ann/smm)	0.49
2192	HLA-A*01:01	ORF3a protein	145	154	10	YFLCWHTNCY	Consensus (ann/smm)	0.48
2193	HLA-A*11:01	ORF3a protein	59	67	9	ASKIITLKK	Consensus (ann/smm)	0.46
2194	HLA-A*01:01	ORF3a protein	105	113	9	FLYLYALVY	Consensus (ann/smm)	0.45
2195	HLA-A*01:01	ORF3a protein	202	212	11	VLHSYFTSDYY	Consensus (ann/smm)	0.45
2196	HLA-A*33:03	ORF3a protein	8	16	9	FTIGVTLK	netmhcpa_el	0.45
2197	HLA-A*33:03	ORF3a protein	227	235	9	HVTFFIYNK	netmhcpa_el	0.45
2198	HLA-A*02:06	ORF3a protein	89	97	9	TVYSHLLL	Consensus (ann/smm)	0.44
2199	HLA-A*01:01	ORF3a protein	100	109	10	GLEAPFLYLY	Consensus (ann/smm)	0.43
2200	HLA-A*01:01	ORF3a protein	146	154	9	FLCWHTNCY	Consensus (ann/smm)	0.42

2201	HLA-A*02:01	ORF3a protein	79	88	10	FVCNLLLLFV	Consensus (ann/smm)	0.42
2202	HLA-A*26:01	ORF3a protein	222	231	10	DTGVEHVTFE	Consensus (ann/smm)	0.41
2203	HLA-A*31:01	ORF3a protein	124	134	11	IMRLWLCWKCR	Consensus (ann/smm)	0.41
2204	HLA-A*02:01	ORF3a protein	72	80	9	ALSKGVHFV	Consensus (ann/comblib_sidney2008/smm)	0.4
2205	HLA-A*33:03	ORF3a protein	119	126	8	NFVRIIMR	netmhcpa_el	0.4
2206	HLA-A*33:03	ORF3a protein	117	126	10	SINFVRIIMR	netmhcpa_el	0.4
2207	HLA-A*02:06	ORF3a protein	217	225	9	TQLSTDTGV	Consensus (ann/smm)	0.39
2208	HLA-A*02:06	ORF3a protein	107	115	9	YLYALVYFL	Consensus (ann/smm)	0.37
2209	HLA-A*11:01	ORF3a protein	8	16	9	FTIGTVTLK	Consensus (ann/smm)	0.37
2210	HLA-A*11:01	ORF3a protein	123	132	10	IIMRLWLCWK	Consensus (ann/smm)	0.36
2211	HLA-A*26:01	ORF3a protein	79	87	9	FVCNLLLLF	Consensus (ann/smm)	0.36
2212	HLA-A*11:01	ORF3a protein	58	67	10	SASKIITLKK	Consensus (ann/smm)	0.35
2213	HLA-A*24:02	ORF3a protein	106	115	10	LYLYALVYFL	Consensus (ann/smm)	0.35
2214	HLA-A*03:01	ORF3a protein	124	132	9	IMRLWLCWK	Consensus (ann/smm)	0.34
2215	HLA-A*33:03	ORF3a protein	118	126	9	INFVRIIMR	netmhcpa_el	0.34
2216	HLA-A*01:01	ORF3a protein	208	216	9	TSDYQQLYS	Consensus (ann/smm)	0.33
2217	HLA-A*11:01	ORF3a protein	58	66	9	SASKIITLK	Consensus (ann/smm)	0.3
2218	HLA-A*31:01	ORF3a protein	126	134	9	RLWLCWKCR	Consensus (ann/smm)	0.3
2219	HLA-A*24:02	ORF3a protein	211	219	9	YYQLYSTQL	Consensus (ann/smm)	0.29
2220	HLA-A*03:01	ORF3a protein	52	61	10	LLAVFQSASK	Consensus (ann/smm)	0.28
2221	HLA-A*26:01	ORF3a protein	19	28	10	EIKDATPSDF	Consensus (ann/smm)	0.28
2222	HLA-A*02:06	ORF3a protein	69	77	9	WQLALSKGV	Consensus (ann/smm)	0.26
2223	HLA-A*11:01	ORF3a protein	227	235	9	HVTFFIYNK	Consensus (ann/smm)	0.24
2224	HLA-A*24:02	ORF3a protein	140	149	10	LYDANYFLCW	Consensus (ann/smm)	0.24
2225	HLA-A*01:01	ORF3a protein	203	212	10	LHSYFTSDYY	Consensus (ann/smm)	0.23
2226	HLA-A*01:01	ORF3a protein	204	212	9	HSYFTSDYY	Consensus (ann/smm)	0.23
2227	HLA-A*24:02	ORF3a protein	112	120	9	VYFLQSINF	Consensus (ann/smm)	0.23
2228	HLA-A*26:01	ORF3a protein	247	255	9	HTIDGSSGV	Consensus (ann/smm)	0.23
2229	HLA-A*01:01	ORF3a protein	175	184	10	TTPISEHDY	Consensus (ann/smm)	0.22

2230	HLA-A*02:06	ORF3a protein	79	88	10	FVCNLLLLFV	Consensus (ann/smm)	0.21
2231	HLA-A*02:01	ORF3a protein	139	147	9	LLYDANYFL	Consensus (ann/comblib_sidney2008/smm)	0.2
2232	HLA-A*02:06	ORF3a protein	46	55	10	LIVGVALLAV	Consensus (ann/smm)	0.2
2233	HLA-A*33:03	ORF3a protein	113	122	10	YFLQSINFVR	netmhcpa_el	0.17
2234	HLA-A*01:01	ORF3a protein	206	215	10	YFTSDYYQLY	Consensus (ann/smm)	0.16
2235	HLA-A*24:02	ORF3a protein	106	114	9	LYLYALVYF	Consensus (ann/smm)	0.14
2236	HLA-A*24:02	ORF3a protein	205	214	10	SYFTSDYYQL	Consensus (ann/smm)	0.14
2237	HLA-A*03:01	ORF3a protein	123	132	10	IIMRLWLCWK	Consensus (ann/smm)	0.13
2238	HLA-A*33:03	ORF3a protein	114	122	9	FLQSINFVR	netmhcpa_el	0.13
2239	HLA-A*01:01	ORF3a protein	207	215	9	FTSDYYQLY	Consensus (ann/smm)	0.11
2240	HLA-A*26:01	ORF3a protein	207	215	9	FTSDYYQLY	Consensus (ann/smm)	0.11
2241	HLA-A*02:01	ORF3a protein	107	115	9	YLYALVYFL	Consensus (ann/comblib_sidney2008/smm)	0.1
2242	HLA-A*11:01	ORF6 protein	14	23	10	ILLIIMRTFK	Consensus (ann/smm)	0.95
2243	HLA-A*01:01	ORF6 protein	40	49	10	LSKSLTENKY	Consensus (ann/smm)	0.94
2244	HLA-A*11:01	ORF6 protein	15	23	9	LLIIMRTFK	Consensus (ann/smm)	0.9
2245	HLA-A*33:03	ORF6 protein	30	38	9	DYIINLIK	netmhcpa_el	0.86
2246	HLA-A*02:06	ORF6 protein	7	16	10	FQVTIAEILL	Consensus (ann/smm)	0.79
2247	HLA-A*02:06	ORF6 protein	16	24	9	LIIMRTFKV	Consensus (ann/smm)	0.7
2248	HLA-A*02:01	ORF6 protein	15	24	10	LLIIMRTFKV	Consensus (ann/smm)	0.69
2249	HLA-A*01:01	ORF6 protein	23	31	9	KVSIWNLDY	Consensus (ann/smm)	0.6
2250	HLA-A*02:06	ORF6 protein	7	15	9	FQVTIAEIL	Consensus (ann/smm)	0.52
2251	HLA-A*03:01	ORF6 protein	15	23	9	LLIIMRTFK	Consensus (ann/smm)	0.36
2252	HLA-A*03:01	ORF6 protein	14	23	10	ILLIIMRTFK	Consensus (ann/smm)	0.17
2253	HLA-A*01:01	ORF7a protein	9	18	10	LITLATCELY	Consensus (ann/smm)	0.95
2254	HLA-A*02:01	ORF7a protein	95	103	9	ELYSPIFLI	Consensus (ann/comblib_sidney2008/smm)	0.95
2255	HLA-A*31:01	ORF7a protein	110	118	9	ITLCFTLKR	Consensus (ann/smm)	0.94
2256	HLA-A*02:01	ORF7a protein	4	13	10	ILFLALITLA	Consensus (ann/smm)	0.91
2257	HLA-A*01:01	ORF7a protein	10	18	9	ITLATCELY	Consensus (ann/smm)	0.9
2258	HLA-A*02:01	ORF7a protein	85	93	9	KLFIRQEEV	Consensus (ann/comblib_sidney2008/smm)	0.9

2259	HLA-A*02:06	ORF7a protein	101	110	10	FLIVAAIVFI	Consensus (ann/smm)	0.9
2260	HLA-A*11:01	ORF7a protein	107	117	11	IVFITLCFTLK	Consensus (ann/smm)	0.9
2261	HLA-A*02:06	ORF7a protein	102	110	9	LIVAAIVFI	Consensus (ann/smm)	0.85
2262	HLA-A*03:01	ORF7a protein	111	119	9	TLCFTLKRK	Consensus (ann/smm)	0.85
2263	HLA-A*26:01	ORF7a protein	38	46	9	GTYEGNSPF	Consensus (ann/smm)	0.84
2264	HLA-A*24:02	ORF7a protein	100	109	10	IFLIVAAIVF	Consensus (ann/smm)	0.79
2265	HLA-A*11:01	ORF7a protein	110	117	8	ITLCFTLK	Consensus (ann/smm)	0.78
2266	HLA-A*33:03	ORF7a protein	80	89	10	RSVSPKLFIR	netmhcpa_el	0.76
2267	HLA-A*11:01	ORF7a protein	109	119	11	FITLCFTLKRK	Consensus (ann/smm)	0.75
2268	HLA-A*02:01	ORF7a protein	6	14	9	FLALITLAT	Consensus (ann/comblib_sidney2008/smm)	0.7
2269	HLA-A*33:03	ORF7a protein	110	118	9	ITLCFTLKR	netmhcpa_el	0.69
2270	HLA-A*24:02	ORF7a protein	96	104	9	LYSPIFLIV	Consensus (ann/smm)	0.64
2271	HLA-A*11:01	ORF7a protein	110	118	9	ITLCFTLKR	Consensus (ann/smm)	0.62
2272	HLA-A*01:01	ORF7a protein	87	97	11	FIRQEEVQELY	Consensus (ann/smm)	0.6
2273	HLA-A*02:01	ORF7a protein	4	12	9	ILFLALITL	Consensus (ann/comblib_sidney2008/smm)	0.6
2274	HLA-A*02:01	ORF7a protein	63	71	9	FAFACPDGV	Consensus (ann/comblib_sidney2008/smm)	0.59
2275	HLA-A*11:01	ORF7a protein	81	89	9	SVSPKLFIR	Consensus (ann/smm)	0.46
2276	HLA-A*31:01	ORF7a protein	81	89	9	SVSPKLFIR	Consensus (ann/smm)	0.45
2277	HLA-A*33:03	ORF7a protein	69	78	10	DGVKHVYQLR	netmhcpa_el	0.45
2278	HLA-A*24:02	ORF7a protein	108	116	9	VFITLCFTL	Consensus (ann/smm)	0.44
2279	HLA-A*01:01	ORF7a protein	11	20	10	TLATCELYHY	Consensus (ann/smm)	0.35
2280	HLA-A*33:03	ORF7a protein	73	80	8	HVYQLRAR	netmhcpa_el	0.35
2281	HLA-A*11:01	ORF7a protein	110	119	10	ITLCFTLKRK	Consensus (ann/smm)	0.33
2282	HLA-A*31:01	ORF7a protein	80	89	10	RSVSPKLFIR	Consensus (ann/smm)	0.31
2283	HLA-A*31:01	ORF7a protein	70	78	9	GVKHVYQLR	Consensus (ann/smm)	0.29
2284	HLA-A*26:01	ORF7a protein	92	101	10	EVQELYSPIF	Consensus (ann/smm)	0.22
2285	HLA-A*02:01	ORF7a protein	101	110	10	FLIVAAIVFI	Consensus (ann/smm)	0.21
2286	HLA-A*26:01	ORF7a protein	92	100	9	EVQELYSPI	Consensus (ann/smm)	0.21
2287	HLA-A*03:01	ORF7a protein	23	32	10	CVRGTTVLLK	Consensus (ann/smm)	0.17

2288	HLA-A*03:01	ORF7a protein	110	119	10	ITLCFTLKRK	Consensus (ann/smm)	0.17
2289	HLA-A*03:01	ORF7a protein	76	85	10	QLRARSVSPK	Consensus (ann/smm)	0.16
2290	HLA-A*33:03	ORF7a protein	70	78	9	GVKHVYQLR	netmhcpa_el	0.11
2291	HLA-A*33:03	ORF7a protein	81	89	9	SVSPKLFIR	netmhcpa_el	0.03
2292	HLA-A*02:06	ORF7b	9	17	9	FYLCFLAFL	Consensus (ann/smm)	1
2293	HLA-A*02:06	ORF7b	6	14	9	LIDFYLCFL	Consensus (ann/smm)	0.94
2294	HLA-A*02:01	ORF7b	12	22	11	CFLAFLFLVL	Consensus (ann/smm)	0.91
2295	HLA-A*02:01	ORF7b	16	24	9	FLLFLVLIM	Consensus (ann/comblib_sidney2008/smm)	0.85
2296	HLA-A*02:01	ORF7b	17	26	10	LLFLVLIMLI	Consensus (ann/smm)	0.85
2297	HLA-A*24:02	ORF7b	22	30	9	LIMLIIFWF	Consensus (ann/smm)	0.79
2298	HLA-A*02:06	ORF7b	5	14	10	SLIDFYLCFL	Consensus (ann/smm)	0.76
2299	HLA-A*02:01	ORF7b	16	26	11	FLLFLVLIMLI	Consensus (ann/smm)	0.75
2300	HLA-A*24:02	ORF7b	7	16	10	IDFYLCFLAF	Consensus (ann/smm)	0.75
2301	HLA-A*24:02	ORF7b	8	16	9	DFYLCFLAF	Consensus (ann/smm)	0.7
2302	HLA-A*24:02	ORF7b	10	19	10	YLCFLAFLLF	Consensus (ann/smm)	0.67
2303	HLA-A*24:02	ORF7b	9	17	9	FYLCFLAFL	Consensus (ann/smm)	0.54
2304	HLA-A*02:06	ORF7b	12	21	10	CFLAFLFLV	Consensus (ann/smm)	0.48
2305	HLA-A*02:01	ORF7b	12	21	10	CFLAFLFLV	Consensus (ann/smm)	0.47
2306	HLA-A*02:01	ORF7b	23	32	10	IMLIIFWFSL	Consensus (ann/smm)	0.43
2307	HLA-A*02:06	ORF7b	24	32	9	MLIIFWFSL	Consensus (ann/smm)	0.41
2308	HLA-A*01:01	ORF7b	1	10	10	MIELSLIDFY	Consensus (ann/smm)	0.35
2309	HLA-A*02:01	ORF7b	10	18	9	YLCFLAFL	Consensus (ann/comblib_sidney2008/smm)	0.3
2310	HLA-A*02:01	ORF7b	16	25	10	FLLFLVLIML	Consensus (ann/smm)	0.3
2311	HLA-A*24:02	ORF7b	9	18	10	FYLCFLAFL	Consensus (ann/smm)	0.28
2312	HLA-A*02:01	ORF7b	13	22	10	FLAFLFLVL	Consensus (ann/smm)	0.26
2313	HLA-A*02:01	ORF7b	24	32	9	MLIIFWFSL	Consensus (ann/comblib_sidney2008/smm)	0.2
2314	HLA-A*02:01	ORF7b	5	14	10	SLIDFYLCFL	Consensus (ann/smm)	0.14
2315	HLA-A*02:01	ORF7b	13	21	9	FLAFLFLV	Consensus (ann/comblib_sidney2008/smm)	0.1
2316	HLA-A*02:06	ORF7b	13	21	9	FLAFLFLV	Consensus (ann/smm)	0.08

2317	HLA-A*33:03	ORF8 protein	106	115	10	EDFLEYHDVR	netmhcpa_el	0.98
2318	HLA-A*33:03	ORF8 protein	103	111	9	SFYEDFLEY	netmhcpa_el	0.88
2319	HLA-A*24:02	ORF8 protein	41	49	9	FYSKWYIRV	Consensus (ann/smm)	0.8
2320	HLA-A*02:06	ORF8 protein	4	13	10	LVFLGIITTV	Consensus (ann/smm)	0.79
2321	HLA-A*33:03	ORF8 protein	44	52	9	KWYIRVGAR	netmhcpa_el	0.75
2322	HLA-A*33:03	ORF8 protein	45	53	9	WYIRVGARK	netmhcpa_el	0.75
2323	HLA-A*02:06	ORF8 protein	73	81	9	YIDIGNYTV	Consensus (ann/smm)	0.73
2324	HLA-A*02:01	ORF8 protein	6	13	8	FLGIITTV	Consensus (ann/smm)	0.72
2325	HLA-A*33:03	ORF8 protein	39	48	10	IHFYSKWYIR	netmhcpa_el	0.71
2326	HLA-A*02:06	ORF8 protein	31	39	9	YVDDPCPI	Consensus (ann/smm)	0.68
2327	HLA-A*01:01	ORF8 protein	101	111	11	RCSFYEDFLEY	Consensus (ann/smm)	0.56
2328	HLA-A*11:01	ORF8 protein	86	94	9	FTINCQEPK	Consensus (ann/smm)	0.54
2329	HLA-A*02:06	ORF8 protein	79	88	10	YTVSCLPFTI	Consensus (ann/smm)	0.53
2330	HLA-A*31:01	ORF8 protein	39	48	10	IHFYSKWYIR	Consensus (ann/smm)	0.53
2331	HLA-A*02:01	ORF8 protein	73	81	9	YIDIGNYTV	Consensus (ann/comblib_sidney2008/smm)	0.5
2332	HLA-A*02:01	ORF8 protein	3	13	11	FLVFLGIITTV	Consensus (ann/smm)	0.46
2333	HLA-A*31:01	ORF8 protein	44	52	9	KWYIRVGAR	Consensus (ann/smm)	0.46
2334	HLA-A*26:01	ORF8 protein	8	16	9	GIITTVAAF	Consensus (ann/smm)	0.45
2335	HLA-A*31:01	ORF8 protein	41	48	8	FYSKWYIR	ann	0.38
2336	HLA-A*24:02	ORF8 protein	78	86	9	NYTVSCLPF	Consensus (ann/smm)	0.34
2337	HLA-A*01:01	ORF8 protein	23	31	9	QSCTQHQPYP	Consensus (ann/smm)	0.28
2338	HLA-A*33:03	ORF8 protein	107	115	9	DFLEYHDVR	netmhcpa_el	0.27
2339	HLA-A*01:01	ORF8 protein	102	111	10	CSFYEDFLEY	Consensus (ann/smm)	0.24
2340	HLA-A*31:01	ORF8 protein	40	48	9	HFYSKWYIR	Consensus (ann/smm)	0.11
2341	HLA-A*33:03	ORF8 protein	40	48	9	HFYSKWYIR	netmhcpa_el	0.02
2342	HLA-A*01:01	surface glycoprotein	196	204	9	NIDGYFKIY	Consensus (ann/smm)	1
2343	HLA-A*26:01	surface glycoprotein	886	894	9	WTFGAGAAL	Consensus (ann/smm)	0.99
2344	HLA-A*26:01	surface glycoprotein	50	59	10	STQDLFLPFF	Consensus (ann/smm)	0.99
2345	HLA-A*01:01	surface glycoprotein	746	756	11	STECNLLLQY	Consensus (ann/smm)	0.98

2346	HLA-A*11:01	surface glycoprotein	161	170	10	SSANNCTFEY	Consensus (ann/smm)	0.98
2347	HLA-A*24:02	surface glycoprotein	755	763	9	QYGSFCTQL	Consensus (ann/smm)	0.98
2348	HLA-A*01:01	surface glycoprotein	152	160	9	WMESEFRVY	Consensus (ann/smm)	0.97
2349	HLA-A*02:06	surface glycoprotein	777	785	9	NTQEVFQV	Consensus (ann/smm)	0.97
2350	HLA-A*02:06	surface glycoprotein	269	277	9	YLQPRTFLL	Consensus (ann/smm)	0.96
2351	HLA-A*33:03	surface glycoprotein	839	847	9	DCLGDIAAR	netmhcpa_el	0.96
2352	HLA-A*02:01	surface glycoprotein	1223	1232	10	GLIAIVMVTI	Consensus (ann/smm)	0.95
2353	HLA-A*11:01	surface glycoprotein	348	356	9	ASVYAWNPK	Consensus (ann/smm)	0.95
2354	HLA-A*33:03	surface glycoprotein	310	319	10	KGIYQTSNFR	netmhcpa_el	0.95
2355	HLA-A*02:06	surface glycoprotein	51	59	9	TQDLFLPFF	Consensus (ann/smm)	0.94
2356	HLA-A*24:02	surface glycoprotein	898	906	9	FAMQMAYRF	Consensus (ann/smm)	0.94
2357	HLA-A*31:01	surface glycoprotein	454	462	9	RLFRKSNLK	Consensus (ann/smm)	0.94
2358	HLA-A*03:01	surface glycoprotein	1064	1073	10	HVTYVPAQEK	Consensus (ann/smm)	0.93
2359	HLA-A*03:01	surface glycoprotein	1020	1028	9	ASANLAATK	Consensus (ann/smm)	0.93
2360	HLA-A*24:02	surface glycoprotein	167	175	9	TFEYVSQPF	Consensus (ann/smm)	0.93
2361	HLA-A*26:01	surface glycoprotein	366	374	9	SVLYNSASF	Consensus (ann/smm)	0.93
2362	HLA-A*31:01	surface glycoprotein	311	319	9	GIYQTSNFR	Consensus (ann/smm)	0.93
2363	HLA-A*31:01	surface glycoprotein	35	44	10	GVYYPDKVFR	Consensus (ann/smm)	0.93
2364	HLA-A*33:03	surface glycoprotein	393	403	11	TNVYADSFVIR	netmhcpa_el	0.93
2365	HLA-A*24:02	surface glycoprotein	635	644	10	VYSTGSNVFQ	Consensus (ann/smm)	0.92
2366	HLA-A*31:01	surface glycoprotein	757	765	9	GSFCTQLNR	Consensus (ann/smm)	0.92
2367	HLA-A*01:01	surface glycoprotein	414	423	10	QTGKIADYNY	Consensus (ann/smm)	0.91
2368	HLA-A*01:01	surface glycoprotein	29	38	10	TNSFTRGVYY	Consensus (ann/smm)	0.91
2369	HLA-A*03:01	surface glycoprotein	1019	1028	10	RASANLAATK	Consensus (ann/smm)	0.91
2370	HLA-A*03:01	surface glycoprotein	939	947	9	SSTASALGK	Consensus (ann/smm)	0.91
2371	HLA-A*03:01	surface glycoprotein	451	458	8	YLRLFRK	Consensus (ann/smm)	0.91
2372	HLA-A*11:01	surface glycoprotein	725	733	9	EILPVSMTK	Consensus (ann/smm)	0.91
2373	HLA-A*01:01	surface glycoprotein	387	396	10	LNDLCFTNVY	Consensus (ann/smm)	0.9
2374	HLA-A*02:01	surface glycoprotein	983	991	9	RLDKVEAEV	Consensus (ann/comblib_sidney2008/smm)	0.9

2375	HLA-A*02:01	surface glycoprotein	1048	1056	9	HLMSFPQSA	Consensus (ann/comblib_sidney2008/smm)	0.9
2376	HLA-A*03:01	surface glycoprotein	723	733	11	TTEILPVSMTK	Consensus (ann/smm)	0.9
2377	HLA-A*24:02	surface glycoprotein	706	714	9	AYSNNSIAI	Consensus (ann/smm)	0.9
2378	HLA-A*24:02	surface glycoprotein	78	86	9	RFDNPVLPF	Consensus (ann/smm)	0.9
2379	HLA-A*02:06	surface glycoprotein	1215	1224	10	YIWLGFIAGL	Consensus (ann/smm)	0.89
2380	HLA-A*26:01	surface glycoprotein	940	948	9	STASALGKL	Consensus (ann/smm)	0.89
2381	HLA-A*11:01	surface glycoprotein	782	790	9	FAQVKQIYK	Consensus (ann/smm)	0.86
2382	HLA-A*33:03	surface glycoprotein	446	454	9	GGNYNYLYR	netmhspan_el	0.86
2383	HLA-A*33:03	surface glycoprotein	816	825	10	SFIEDLLFNK	netmhspan_el	0.85
2384	HLA-A*01:01	surface glycoprotein	1196	1206	11	SLIDLQELGKY	Consensus (ann/smm)	0.84
2385	HLA-A*33:03	surface glycoprotein	1005	1014	10	QTYVTQQLIR	netmhspan_el	0.84
2386	HLA-A*01:01	surface glycoprotein	828	837	10	LADAGFIKQY	Consensus (ann/smm)	0.82
2387	HLA-A*11:01	surface glycoprotein	550	558	9	GVLTESNKK	Consensus (ann/smm)	0.82
2388	HLA-A*26:01	surface glycoprotein	780	788	9	EVFAQVKQI	Consensus (ann/smm)	0.82
2389	HLA-A*26:01	surface glycoprotein	1220	1228	9	FIAGLIAIV	Consensus (ann/smm)	0.82
2390	HLA-A*31:01	surface glycoprotein	12	21	10	SSQCVNLTR	Consensus (ann/smm)	0.82
2391	HLA-A*11:01	surface glycoprotein	817	825	9	FIEDLLFNK	Consensus (ann/smm)	0.81
2392	HLA-A*31:01	surface glycoprotein	395	403	9	VYADSFVIR	Consensus (ann/smm)	0.81
2393	HLA-A*33:03	surface glycoprotein	30	38	9	NSFTRGVYY	netmhspan_el	0.81
2394	HLA-A*33:03	surface glycoprotein	991	1000	10	VQIDRLITGR	netmhspan_el	0.81
2395	HLA-A*01:01	surface glycoprotein	269	279	11	YLQPRTFLLKY	Consensus (ann/smm)	0.8
2396	HLA-A*01:01	surface glycoprotein	499	508	10	PTNGVGYQPY	Consensus (ann/smm)	0.8
2397	HLA-A*02:01	surface glycoprotein	718	726	9	FTISVTTEI	Consensus (ann/comblib_sidney2008/smm)	0.8
2398	HLA-A*33:03	surface glycoprotein	568	577	10	DIADTTDAVR	netmhspan_el	0.8
2399	HLA-A*03:01	surface glycoprotein	301	310	10	CTLKSFTVEK	Consensus (ann/smm)	0.79
2400	HLA-A*11:01	surface glycoprotein	1236	1245	10	CMTSCCCLK	Consensus (ann/smm)	0.79
2401	HLA-A*33:03	surface glycoprotein	264	273	10	AYYVGYLQPR	netmhspan_el	0.79
2402	HLA-A*11:01	surface glycoprotein	757	765	9	GSFCTQLNR	Consensus (ann/smm)	0.78
2403	HLA-A*11:01	surface glycoprotein	723	733	11	TTEILPVSMTK	Consensus (ann/smm)	0.78

2404	HLA-A*33:03	surface glycoprotein	348	357	10	ASVYAWNRKR	netmhcpa_el	0.78
2405	HLA-A*33:03	surface glycoprotein	974	983	10	SSVLNDILSR	netmhcpa_el	0.78
2406	HLA-A*02:01	surface glycoprotein	515	524	10	FELLHAPATV	Consensus (ann/smm)	0.77
2407	HLA-A*33:03	surface glycoprotein	399	408	10	SFVIRGDEVV	netmhcpa_el	0.77
2408	HLA-A*33:03	surface glycoprotein	558	567	10	KFLPFQQFGR	netmhcpa_el	0.77
2409	HLA-A*26:01	surface glycoprotein	895	904	10	QIPFAMQMAY	Consensus (ann/smm)	0.76
2410	HLA-A*33:03	surface glycoprotein	782	790	9	FAQVKQIYK	netmhcpa_el	0.75
2411	HLA-A*33:03	surface glycoprotein	207	214	8	HTPINLVR	netmhcpa_el	0.75
2412	HLA-A*01:01	surface glycoprotein	135	144	10	FCNDPFLGVY	Consensus (ann/smm)	0.74
2413	HLA-A*33:03	surface glycoprotein	450	457	8	NYLYRLFR	netmhcpa_el	0.73
2414	HLA-A*01:01	surface glycoprotein	746	754	9	STECSNLLL	Consensus (ann/smm)	0.72
2415	HLA-A*03:01	surface glycoprotein	409	417	9	QIAPGQTGK	Consensus (ann/smm)	0.72
2416	HLA-A*02:06	surface glycoprotein	894	902	9	LQIPFAMQM	Consensus (ann/smm)	0.71
2417	HLA-A*11:01	surface glycoprotein	269	278	10	YLQPRTFLLK	Consensus (ann/smm)	0.71
2418	HLA-A*26:01	surface glycoprotein	192	201	10	FVFKNIDGYF	Consensus (ann/smm)	0.71
2419	HLA-A*31:01	surface glycoprotein	348	357	10	ASVYAWNRKR	Consensus (ann/smm)	0.71
2420	HLA-A*02:01	surface glycoprotein	417	425	9	KIADYNYKL	Consensus (ann/comblib_sidney2008/smm)	0.7
2421	HLA-A*02:01	surface glycoprotein	1000	1008	9	RLQSLQTYV	Consensus (ann/comblib_sidney2008/smm)	0.7
2422	HLA-A*03:01	surface glycoprotein	370	378	9	NSASFSTFK	Consensus (ann/smm)	0.7
2423	HLA-A*01:01	surface glycoprotein	160	168	9	YSSANNCTF	Consensus (ann/smm)	0.69
2424	HLA-A*03:01	surface glycoprotein	104	113	10	WIFGTTLDSK	Consensus (ann/smm)	0.69
2425	HLA-A*11:01	surface glycoprotein	975	983	9	SVLNDILSR	Consensus (ann/smm)	0.69
2426	HLA-A*11:01	surface glycoprotein	1019	1028	10	RASANLAATK	Consensus (ann/smm)	0.69
2427	HLA-A*03:01	surface glycoprotein	378	386	9	KCYGVSPVK	Consensus (ann/smm)	0.68
2428	HLA-A*24:02	surface glycoprotein	1211	1219	9	KWPWYIWLG	Consensus (ann/smm)	0.68
2429	HLA-A*26:01	surface glycoprotein	554	562	9	ESNKKFLPF	Consensus (ann/smm)	0.68
2430	HLA-A*03:01	surface glycoprotein	827	835	9	TLADAGFIK	Consensus (ann/smm)	0.67
2431	HLA-A*11:01	surface glycoprotein	956	964	9	AQALNTLVK	Consensus (ann/smm)	0.67
2432	HLA-A*31:01	surface glycoprotein	449	457	9	YNYLYRLFR	Consensus (ann/smm)	0.67

2433	HLA-A*33:03	surface glycoprotein	673	682	10	SYQTQTNSPR	netmhcpa_el	0.66
2434	HLA-A*02:06	surface glycoprotein	133	142	10	FQFCNDPFLG	Consensus (ann/smm)	0.65
2435	HLA-A*03:01	surface glycoprotein	1196	1205	10	SLIDLQELGK	Consensus (ann/smm)	0.65
2436	HLA-A*02:06	surface glycoprotein	643	651	9	FQTRAGCLI	Consensus (ann/smm)	0.64
2437	HLA-A*11:01	surface glycoprotein	192	202	11	FVFKNIDGYFK	Consensus (ann/smm)	0.64
2438	HLA-A*24:02	surface glycoprotein	144	152	9	YYHKNNKSW	Consensus (ann/smm)	0.64
2439	HLA-A*31:01	surface glycoprotein	677	685	9	QTNSPRRAR	Consensus (ann/smm)	0.64
2440	HLA-A*31:01	surface glycoprotein	673	682	10	SYQTQTNSPR	Consensus (ann/smm)	0.64
2441	HLA-A*01:01	surface glycoprotein	136	145	10	CNDPFLGVYY	Consensus (ann/smm)	0.63
2442	HLA-A*01:01	surface glycoprotein	733	741	9	KTSVDCTMY	Consensus (ann/smm)	0.63
2443	HLA-A*03:01	surface glycoprotein	408	417	10	RQIAPGQTGK	Consensus (ann/smm)	0.63
2444	HLA-A*33:03	surface glycoprotein	94	102	9	STKSNIIR	netmhcpa_el	0.62
2445	HLA-A*02:06	surface glycoprotein	720	729	10	ISVTTEILPV	Consensus (ann/smm)	0.61
2446	HLA-A*03:01	surface glycoprotein	938	947	10	LSSTASALGK	Consensus (ann/smm)	0.61
2447	HLA-A*26:01	surface glycoprotein	718	726	9	FTISVTTEI	Consensus (ann/smm)	0.61
2448	HLA-A*33:03	surface glycoprotein	370	378	9	NSASFSTFK	netmhcpa_el	0.61
2449	HLA-A*33:03	surface glycoprotein	138	147	10	DPFLGVYYHK	netmhcpa_el	0.61
2450	HLA-A*01:01	surface glycoprotein	27	37	11	AYTNSFTRGVY	Consensus (ann/smm)	0.6
2451	HLA-A*02:06	surface glycoprotein	718	726	9	FTISVTTEI	Consensus (ann/smm)	0.6
2452	HLA-A*11:01	surface glycoprotein	371	378	8	SASFSTFK	Consensus (ann/smm)	0.6
2453	HLA-A*33:03	surface glycoprotein	37	44	8	YYPDKVFR	netmhcpa_el	0.6
2454	HLA-A*01:01	surface glycoprotein	257	266	10	GWTAGAAAYY	Consensus (ann/smm)	0.59
2455	HLA-A*26:01	surface glycoprotein	166	175	10	CTFEYVSQPF	Consensus (ann/smm)	0.59
2456	HLA-A*33:03	surface glycoprotein	302	310	9	TLKSFTVEK	netmhcpa_el	0.59
2457	HLA-A*01:01	surface glycoprotein	136	144	9	CNDPFLGVY	Consensus (ann/smm)	0.58
2458	HLA-A*02:06	surface glycoprotein	1060	1068	9	VVFLHVITYV	Consensus (ann/smm)	0.58
2459	HLA-A*26:01	surface glycoprotein	1095	1103	9	FVSNNGTHWF	Consensus (ann/smm)	0.58
2460	HLA-A*11:01	surface glycoprotein	302	310	9	TLKSFTVEK	Consensus (ann/smm)	0.57
2461	HLA-A*02:06	surface glycoprotein	964	973	10	KQLSSNFGAI	Consensus (ann/smm)	0.56

2462	HLA-A*33:03	surface glycoprotein	26	34	9	PAYTNSFTR	netmhcpa_el	0.56
2463	HLA-A*33:03	surface glycoprotein	58	66	9	FFSNVTWFH	netmhcpa_el	0.56
2464	HLA-A*02:06	surface glycoprotein	754	763	10	LQYGSFCTQL	Consensus (ann/smm)	0.55
2465	HLA-A*24:02	surface glycoprotein	488	498	11	CYFPLQSYGFQ	Consensus (ann/smm)	0.55
2466	HLA-A*24:02	surface glycoprotein	1094	1103	10	VFVSNQTHWF	Consensus (ann/smm)	0.55
2467	HLA-A*24:02	surface glycoprotein	203	212	10	IYSKHTPINL	Consensus (ann/smm)	0.55
2468	HLA-A*33:03	surface glycoprotein	675	683	9	QTQTNPRR	netmhcpa_el	0.55
2469	HLA-A*33:03	surface glycoprotein	898	905	8	FAMQMAYR	netmhcpa_el	0.55
2470	HLA-A*31:01	surface glycoprotein	264	273	10	AYYVGYLQPR	Consensus (ann/smm)	0.54
2471	HLA-A*31:01	surface glycoprotein	457	466	10	RKSNLKPFR	Consensus (ann/smm)	0.54
2472	HLA-A*33:03	surface glycoprotein	193	202	10	VFKNIDGYFK	netmhcpa_el	0.54
2473	HLA-A*01:01	surface glycoprotein	285	293	9	ITDAVDCAL	Consensus (ann/smm)	0.53
2474	HLA-A*03:01	surface glycoprotein	302	310	9	TLKSFTVEK	Consensus (ann/smm)	0.53
2475	HLA-A*24:02	surface glycoprotein	634	643	10	RVYSTGSNVF	Consensus (ann/smm)	0.53
2476	HLA-A*33:03	surface glycoprotein	992	1000	9	QIDRLITGR	netmhcpa_el	0.53
2477	HLA-A*02:01	surface glycoprotein	1215	1224	10	YIWLGFIAGL	Consensus (ann/smm)	0.52
2478	HLA-A*11:01	surface glycoprotein	938	947	10	LSSTASALGK	Consensus (ann/smm)	0.52
2479	HLA-A*24:02	surface glycoprotein	1066	1075	10	TYVPAQEKNF	Consensus (ann/smm)	0.51
2480	HLA-A*33:03	surface glycoprotein	676	685	10	TQTNSPRRAR	netmhcpa_el	0.51
2481	HLA-A*01:01	surface glycoprotein	30	38	9	NSFTRGVYY	Consensus (ann/smm)	0.5
2482	HLA-A*02:01	surface glycoprotein	2	10	9	FVFLVLLPL	Consensus (ann/comblib_sidney2008/smm)	0.5
2483	HLA-A*33:03	surface glycoprotein	400	408	9	FVIRGDEVR	netmhcpa_el	0.5
2484	HLA-A*33:03	surface glycoprotein	458	466	9	KSNLKPFR	netmhcpa_el	0.5
2485	HLA-A*01:01	surface glycoprotein	1197	1206	10	LIDLQELGKY	Consensus (ann/smm)	0.49
2486	HLA-A*33:03	surface glycoprotein	1098	1107	10	NGTHWFVTQR	netmhcpa_el	0.49
2487	HLA-A*03:01	surface glycoprotein	41	49	9	KVFRSSVLH	Consensus (ann/smm)	0.48
2488	HLA-A*33:03	surface glycoprotein	559	567	9	FLPFQQFGR	netmhcpa_el	0.48
2489	HLA-A*03:01	surface glycoprotein	786	795	10	KQIYKTPPIK	Consensus (ann/smm)	0.47
2490	HLA-A*01:01	surface glycoprotein	440	449	10	NLDSKVGQNY	Consensus (ann/smm)	0.46

2491	HLA-A*11:01	surface glycoprotein	827	835	9	TLADAGFIK	Consensus (ann/smm)	0.46
2492	HLA-A*24:02	surface glycoprotein	268	277	10	GYLQPRTFLL	Consensus (ann/smm)	0.46
2493	HLA-A*26:01	surface glycoprotein	50	58	9	STQDLFLPF	Consensus (ann/smm)	0.46
2494	HLA-A*01:01	surface glycoprotein	865	874	10	LTDEMIAQYT	Consensus (ann/smm)	0.45
2495	HLA-A*24:02	surface glycoprotein	169	177	9	EYVSQPFLM	Consensus (ann/smm)	0.45
2496	HLA-A*33:03	surface glycoprotein	725	733	9	EILPVSMTK	netmhcpa_el	0.44
2497	HLA-A*11:01	surface glycoprotein	142	150	9	GVVYHKNNK	Consensus (ann/smm)	0.43
2498	HLA-A*26:01	surface glycoprotein	583	592	10	EILDITPCSF	Consensus (ann/smm)	0.43
2499	HLA-A*02:01	surface glycoprotein	386	395	10	KLNDLCFTNV	Consensus (ann/smm)	0.42
2500	HLA-A*11:01	surface glycoprotein	1196	1205	10	SLIDLQELGK	Consensus (ann/smm)	0.42
2501	HLA-A*02:06	surface glycoprotein	817	826	10	FIEDLLFNKV	Consensus (ann/smm)	0.41
2502	HLA-A*11:01	surface glycoprotein	1020	1028	9	ASANLAATK	Consensus (ann/smm)	0.41
2503	HLA-A*02:01	surface glycoprotein	1220	1228	9	FIAGLIAIV	Consensus (ann/comblib_sidney2008/smm)	0.4
2504	HLA-A*03:01	surface glycoprotein	1236	1245	10	CMTSCCCLK	Consensus (ann/smm)	0.4
2505	HLA-A*11:01	surface glycoprotein	1065	1073	9	VTYVPAQEK	Consensus (ann/smm)	0.4
2506	HLA-A*11:01	surface glycoprotein	370	378	9	NSASFSTFK	Consensus (ann/smm)	0.4
2507	HLA-A*33:03	surface glycoprotein	69	78	10	HVSGTNGTKR	netmhcpa_el	0.4
2508	HLA-A*11:01	surface glycoprotein	816	825	10	SFIEDLLFNK	Consensus (ann/smm)	0.39
2509	HLA-A*24:02	surface glycoprotein	1205	1214	10	KYEYIKWPW	Consensus (ann/smm)	0.39
2510	HLA-A*31:01	surface glycoprotein	349	357	9	SVYAWNRKR	Consensus (ann/smm)	0.39
2511	HLA-A*33:03	surface glycoprotein	198	206	9	DGYFKIYSK	netmhcpa_el	0.39
2512	HLA-A*33:03	surface glycoprotein	896	905	10	IPFAMQMAYR	netmhcpa_el	0.39
2513	HLA-A*01:01	surface glycoprotein	361	369	9	CVADYSVLY	Consensus (ann/smm)	0.38
2514	HLA-A*02:06	surface glycoprotein	786	794	9	KQIYKTPPI	Consensus (ann/smm)	0.38
2515	HLA-A*03:01	surface glycoprotein	1237	1245	9	MTSCCCLK	Consensus (ann/smm)	0.38
2516	HLA-A*24:02	surface glycoprotein	328	338	11	RFPNITNLCPF	Consensus (ann/smm)	0.38
2517	HLA-A*26:01	surface glycoprotein	28	37	10	YTNSFTRGVY	Consensus (ann/smm)	0.38
2518	HLA-A*31:01	surface glycoprotein	448	457	10	NYNLYRLFR	Consensus (ann/smm)	0.38
2519	HLA-A*02:06	surface glycoprotein	258	267	10	WTAGAAAYV	Consensus (ann/smm)	0.37

2520	HLA-A*02:06	surface glycoprotein	2	10	9	FVFLVLLPL	Consensus (ann/smm)	0.37
2521	HLA-A*33:03	surface glycoprotein	229	237	9	LPIGINITR	netmhcpa_el	0.37
2522	HLA-A*24:02	surface glycoprotein	350	358	9	VYAWNKRRI	Consensus (ann/smm)	0.34
2523	HLA-A*24:02	surface glycoprotein	312	320	9	IYQTSNFRV	Consensus (ann/smm)	0.34
2524	HLA-A*33:03	surface glycoprotein	450	458	9	NYLYRLFRK	netmhcpa_el	0.34
2525	HLA-A*11:01	surface glycoprotein	454	462	9	RLFRKSNLK	Consensus (ann/smm)	0.33
2526	HLA-A*11:01	surface glycoprotein	301	310	10	CTLKSFTVEK	Consensus (ann/smm)	0.33
2527	HLA-A*24:02	surface glycoprotein	897	906	10	PFAMQMAYRF	Consensus (ann/smm)	0.33
2528	HLA-A*24:02	surface glycoprotein	507	515	9	PYRVVLSF	Consensus (ann/smm)	0.33
2529	HLA-A*31:01	surface glycoprotein	237	246	10	RFQTLALHR	Consensus (ann/smm)	0.33
2530	HLA-A*02:06	surface glycoprotein	1220	1228	9	FIAGLIAIV	Consensus (ann/smm)	0.32
2531	HLA-A*11:01	surface glycoprotein	939	947	9	SSTASALGK	Consensus (ann/smm)	0.32
2532	HLA-A*02:01	surface glycoprotein	269	277	9	YLQPRFLL	Consensus (ann/comblib_sidney2008/smm)	0.3
2533	HLA-A*02:06	surface glycoprotein	964	972	9	KQLSSNFGA	Consensus (ann/smm)	0.3
2534	HLA-A*33:03	surface glycoprotein	897	905	9	PFAMQMAYR	netmhcpa_el	0.3
2535	HLA-A*33:03	surface glycoprotein	1006	1014	9	TYVTQQLIR	netmhcpa_el	0.3
2536	HLA-A*33:03	surface glycoprotein	448	457	10	NYNYLYRLFR	netmhcpa_el	0.29
2537	HLA-A*01:01	surface glycoprotein	604	612	9	TSNQVAVLY	Consensus (ann/smm)	0.28
2538	HLA-A*01:01	surface glycoprotein	864	873	10	LLTDEMIAQY	Consensus (ann/smm)	0.28
2539	HLA-A*02:01	surface glycoprotein	2	11	10	FVFLVLLPLV	Consensus (ann/smm)	0.28
2540	HLA-A*11:01	surface glycoprotein	724	733	10	TEILPVSMTK	Consensus (ann/smm)	0.28
2541	HLA-A*31:01	surface glycoprotein	310	319	10	KGIYQTSNFR	Consensus (ann/smm)	0.28
2542	HLA-A*33:03	surface glycoprotein	228	237	10	DLPIGINITR	netmhcpa_el	0.28
2543	HLA-A*01:01	surface glycoprotein	603	612	10	NTSNQVAVLY	Consensus (ann/smm)	0.27
2544	HLA-A*03:01	surface glycoprotein	1065	1073	9	VTYVPAQEK	Consensus (ann/smm)	0.27
2545	HLA-A*03:01	surface glycoprotein	787	795	9	QIYKTPPIK	Consensus (ann/smm)	0.27
2546	HLA-A*33:03	surface glycoprotein	346	355	10	RFASVYAWNR	netmhcpa_el	0.27
2547	HLA-A*31:01	surface glycoprotein	150	158	9	KSWMESEFR	Consensus (ann/smm)	0.26
2548	HLA-A*33:03	surface glycoprotein	638	646	9	TGSNVFQTR	netmhcpa_el	0.26

2549	HLA-A*01:01	surface glycoprotein	161	170	10	SSANNCTFEY	Consensus (ann/smm)	0.25
2550	HLA-A*31:01	surface glycoprotein	346	355	10	RFASVYAWNR	Consensus (ann/smm)	0.25
2551	HLA-A*31:01	surface glycoprotein	1099	1107	9	GTHWFVTQR	Consensus (ann/smm)	0.24
2552	HLA-A*11:01	surface glycoprotein	89	97	9	GVYFASTEK	Consensus (ann/smm)	0.23
2553	HLA-A*33:03	surface glycoprotein	637	646	10	STGSNVFQTR	netmhcpa_el	0.23
2554	HLA-A*11:01	surface glycoprotein	826	835	10	VTLADAGFIK	Consensus (ann/smm)	0.22
2555	HLA-A*26:01	surface glycoprotein	191	200	10	EFVFKNIDGY	Consensus (ann/smm)	0.22
2556	HLA-A*02:01	surface glycoprotein	1095	1104	10	FVSNQTHWFV	Consensus (ann/smm)	0.21
2557	HLA-A*24:02	surface glycoprotein	1208	1217	10	QYIKWPWYIW	Consensus (ann/smm)	0.21
2558	HLA-A*33:03	surface glycoprotein	347	355	9	FASVYAWNR	netmhcpa_el	0.21
2559	HLA-A*03:01	surface glycoprotein	89	97	9	GVYFASTEK	Consensus (ann/smm)	0.2
2560	HLA-A*03:01	surface glycoprotein	142	150	9	GVYYHKNNK	Consensus (ann/smm)	0.2
2561	HLA-A*11:01	surface glycoprotein	1237	1245	9	MTSCCCLK	Consensus (ann/smm)	0.2
2562	HLA-A*24:02	surface glycoprotein	367	377	11	VLYNSASFSTF	Consensus (ann/smm)	0.2
2563	HLA-A*33:03	surface glycoprotein	449	457	9	YNYLYRLFR	netmhcpa_el	0.2
2564	HLA-A*33:03	surface glycoprotein	501	509	9	NGVGYQPYR	netmhcpa_el	0.2
2565	HLA-A*33:03	surface glycoprotein	35	44	10	GVYYPDKVFR	netmhcpa_el	0.2
2566	HLA-A*02:06	surface glycoprotein	612	620	9	YQDVNCTEV	Consensus (ann/smm)	0.19
2567	HLA-A*26:01	surface glycoprotein	686	695	10	SVASQSIIAY	Consensus (ann/smm)	0.19
2568	HLA-A*31:01	surface glycoprotein	182	190	9	KQGNFKNLR	Consensus (ann/smm)	0.19
2569	HLA-A*02:06	surface glycoprotein	900	909	10	MQMAYRFNGI	Consensus (ann/smm)	0.18
2570	HLA-A*02:06	surface glycoprotein	1095	1104	10	FVSNQTHWFV	Consensus (ann/smm)	0.18
2571	HLA-A*03:01	surface glycoprotein	269	278	10	YLQPRFTLLK	Consensus (ann/smm)	0.18
2572	HLA-A*31:01	surface glycoprotein	36	44	9	VYYPDKVFR	Consensus (ann/smm)	0.18
2573	HLA-A*01:01	surface glycoprotein	258	266	9	WTAGAAAYY	Consensus (ann/smm)	0.17
2574	HLA-A*01:01	surface glycoprotein	28	37	10	YTNSFTRGVY	Consensus (ann/smm)	0.17
2575	HLA-A*01:01	surface glycoprotein	863	873	11	PLLTDEMIQY	Consensus (ann/smm)	0.17
2576	HLA-A*24:02	surface glycoprotein	635	643	9	VYSTGSNVF	Consensus (ann/smm)	0.17
2577	HLA-A*24:02	surface glycoprotein	448	456	9	NYNYLYRLF	Consensus (ann/smm)	0.17

2578	HLA-A*24:02	surface glycoprotein	489	497	9	YFPLQSYGF	Consensus (ann/smm)	0.17
2579	HLA-A*26:01	surface glycoprotein	361	369	9	CVADYSVLV	Consensus (ann/smm)	0.17
2580	HLA-A*26:01	surface glycoprotein	298	306	9	ETKCTLKSF	Consensus (ann/smm)	0.17
2581	HLA-A*33:03	surface glycoprotein	311	319	9	GIYQTSNFR	netmhcpa_el	0.17
2582	HLA-A*24:02	surface glycoprotein	265	275	11	YYVGYLQPRTF	Consensus (ann/smm)	0.15
2583	HLA-A*31:01	surface glycoprotein	458	466	9	KSNLKPFR	Consensus (ann/smm)	0.14
2584	HLA-A*31:01	surface glycoprotein	558	567	10	KFLPFQFGR	Consensus (ann/smm)	0.14
2585	HLA-A*26:01	surface glycoprotein	780	789	10	EVFAQVKQIY	Consensus (ann/smm)	0.13
2586	HLA-A*33:03	surface glycoprotein	265	273	9	YYVGYLQPR	netmhcpa_el	0.13
2587	HLA-A*24:02	surface glycoprotein	159	168	10	VYSSANNCTF	Consensus (ann/smm)	0.12
2588	HLA-A*24:02	surface glycoprotein	488	497	10	CYFPLQSYGF	Consensus (ann/smm)	0.12
2589	HLA-A*33:03	surface glycoprotein	395	403	9	VYADSFVIR	netmhcpa_el	0.12
2590	HLA-A*01:01	surface glycoprotein	865	873	9	LTDEMIAQY	Consensus (ann/smm)	0.11
2591	HLA-A*02:06	surface glycoprotein	133	141	9	FQFCNDPFL	Consensus (ann/smm)	0.11
2592	HLA-A*24:02	surface glycoprotein	368	377	10	LYNSASFSTF	Consensus (ann/smm)	0.11
2593	HLA-A*24:02	surface glycoprotein	1211	1220	10	KWPWYIWLGF	Consensus (ann/smm)	0.11
2594	HLA-A*24:02	surface glycoprotein	1208	1216	9	QYIKWPWYI	Consensus (ann/smm)	0.11
2595	HLA-A*26:01	surface glycoprotein	192	200	9	FVFKNIDGY	Consensus (ann/smm)	0.11
2596	HLA-A*26:01	surface glycoprotein	258	266	9	WTAGAAAYY	Consensus (ann/smm)	0.11
2597	HLA-A*33:03	surface glycoprotein	975	983	9	SVLNDILSR	netmhcpa_el	0.11
2598	HLA-A*02:06	surface glycoprotein	2	11	10	FVFLVLLPLV	Consensus (ann/smm)	0.1
2599	HLA-A*03:01	surface glycoprotein	454	462	9	RLFRKSNLK	Consensus (ann/smm)	0.1
2600	HLA-A*33:03	surface glycoprotein	1099	1107	9	GTHWFVTQR	netmhcpa_el	0.1
2601	HLA-A*33:03	surface glycoprotein	394	403	10	NVYADSFVIR	netmhcpa_el	0.09
2602	HLA-A*33:03	surface glycoprotein	677	685	9	QTNSPRRAR	netmhcpa_el	0.08
2603	HLA-A*33:03	surface glycoprotein	36	44	9	VYYPDKVFR	netmhcpa_el	0.06
2604	HLA-A*33:03	surface glycoprotein	349	357	9	SVYAWNRKR	netmhcpa_el	0.02