

**Supplemental Table S2.Binding affinity and conservation of HLA-A\*02- and HLA-B\*07-restricted HIV-1 epitopes.**

Restriction	Epitope	HIV-1 antigen	Peptide	aa	Location <sup>1</sup>		HLA-I binding score <sup>2</sup>			Epitope conservation (%) <sup>3</sup>	
					genome	antigen	BIMAS	SYFPEITHI	NetMHC	Group M	Clade B
HLA-A*0201	Published <sup>4</sup>	Gag <sub>p17</sub>	Gag-SL9	SLYNTVATL	1018	77	157	31	94	32	46
	Published <sup>4</sup>	Pol	Pol-IV9	ILKEPVHGV	3474	464	-	30	72	61	76
	Published <sup>4</sup>	Env	Env-KL9	KLTPLCVTL	6585	121	75	27	27	81	86
	Published <sup>4</sup>	Nef	Nef-LL9	LTFGWCFKL	9364	190	-	21	33	65	73
	Predicted	ASP	ASP-AL9	ALFSLCTTL	7759	62	-	-	20	42	87
	Predicted	ASP	ASP-SL10	SLCTTLLFAL	7750	65	285	-	25	35	80
	Predicted	ASP	<b>ASP-YL9</b>	<b>YLYNSLLQL</b>	<b>7686</b>	<b>88</b>	<b>723</b>	<b>28</b>	<b>7</b>	<b>85</b>	<b>90</b>
	Predicted	ASP	ASP-SL9	SLISPPPGL	7654	97	-	27	44	38	52
	Predicted	ASP	ASP-VV10	VLFDPVSLQV	7447	166	4125	-	12	<1	<1
	Predicted	ASP	ASP-VL9	VLLNSCVEL	7405	180	134	27	14	2.8	8
HLA-B*0702	Published <sup>4</sup>	Gag <sub>p24</sub>	Gag-SV9	SPRTLNAWV	1231	148	-	19	19	92	94
	Published <sup>4</sup>	Gag <sub>p24</sub>	Gag-TL9	TPQDLNTML	1327	180	80	21	-	68	94
	Published <sup>4</sup>	Gag <sub>p27p156</sub>	Gag-YF10	YPLASLRSLF	2239	484	-	21	13	12	40
	Published <sup>4</sup>	Vpu	Vpu-QL10	QPIQIAIAL	6065	2	80	22	82	<1	1
	Published <sup>4</sup>	Env	Env-AV10	APTKAKRRRVV	7713	497	-	21	24	32	72
	Published <sup>4</sup>	Nef	Nef-RL9	RPMTYKAAL	9025	77	240	24	7	5	8
	Predicted	ASP	<b>ASP-TL10</b>	<b>TPNGSIFTL</b>	<b>7711</b>	<b>78</b>	<b>80</b>	<b>24</b>	<b>76</b>	<b>15</b>	<b>35</b>
	Predicted	ASP	ASP-DL9	DPSVLQVLL	7438	169	80	24	-	<1	<1

<sup>1</sup> HXB2 nucleotide location and ASP or Gag aa position

<sup>2</sup> Relative scores from 3 algorithms predicting association of the peptide candidate with HLA-A\*02 or HLA-B\*07. Scores >80 for BIMAS, >24 for SYFPEITHI and <80 for NetMHC are predictive of a high HLA-I binding

<sup>3</sup> Determined using sequences from Los Alamos database; 4,418 (group M); 1,934 (clade B)

<sup>4</sup> References 40-42

- : not predicted; aa: amino acid