

Table 8: **Protease**

HXB2 Location	Author Location	Sequence	Immunogen	Species(HLA)	References
Protease(3–11)	RT(71–79 A/B/D) • C. Brander notes this is an A*7401 epitope	ITLWQRPLV	?	human(A*7401)	[Brander & Goulder(2001)]
Protease(3–11)	RT(71–79 A/B/D) • C. Brander notes this is an A*6802 epitope	ITLWQRPLV	?	human(A*6802)	[Brander & Goulder(2001)]
Protease(3–11)	Protease(71–79 LAD)	ITLWQRPLV		human(A*6802, A*7401, A19)	[Dong (1998)]
Protease(30–38)	Pol() • HIV-specific CTL were found in exposed seronegative prostitutes from Nairobi – these CTL may confer protection • Seroprevalence in this cohort is 90–95% and their HIV-1 exposure is among the highest in the world • Most isolated HIV strains are clade A in Nairobi, although clades C and D are also found – B clade epitopes are often cross-reactive, however stronger responses are frequently observed using A or D clade versions of epitopes • This epitope is conserved among B and D clade viruses • The Clade A version of the epitope: DTVLEDINL • This epitope was recognized by two different exposed and uninfected prostitutes • This epitope was identified by screening 49 HIV-1 peptides with the predicted A*6802 anchor residue motif x(VT)xxxxxx(VL)	DTVLEEMNL	HIV-1 exposure	human(A*6802)	[Rowland-Jones (1998b)]
Protease(30–38)	Pol() • 11/16 heavily HIV exposed but persistently seronegative sex-workers in Nairobi had HIV-specific CD8 γ -IFN responses in the cervix – systemic CD8+ T cell responses tended to be to the same epitopes but at generally lower levels than cervical CD8+ T cell responses • Low risk individuals did not have such CD8+ cells • CD8+ epitopes T cell DTVLEDINL (3 individuals), SLYNVATL (4 individuals), LSPRTLNAW (3 individuals) and YPLTFGWCF (4 individuals) were most commonly recognized by the HIV-resistant women	DTVLEDINL	HIV-1 exposed seronegative	human(A*6802)	[Kaul (2000)]
Protease(30–38)	RT(85–93 Clade D) • C. Brander notes this is an A*6802 epitope	DTVLEEWNL	?	human(A*6802)	[Brander & Goulder(2001)]

HIV CTL Epitopes

HXB2 Location	Author Location	Sequence	Immunogen	Species(HLA)	References
Protease(75–84)	Protease(75–84 MN) <ul style="list-style-type: none"> • Peptide predicted to be reactive based on HLA-A*0201 binding motif • Peptide could stimulate CTL in PBMC from 5/6 seronegative donors • Peptide located in a highly conserved region of protease • Both 9-mer and 10-mer could stimulate CTL: VLVGPTPVNI and LVGPTPVNI • Binding affinity to A*0201 was measured, $C_{1/2\max} \mu M = 6$ for 10-mer, 3 for 9-mer • MAL variant of Pr(75–84 MN), with substitutions V77, G78, and P79, gave reduced binding and CTL recognition 	VLVGPTPVNI	<i>in vitro</i> stimulation	human(A*0201)	[Konya (1997)]

CTL