

Table 1: **HIV HLA-A1 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (TSM), 3 (DE), 4 (P), C term (Y)		[Kast94, DiBrino94a]
HLA-A1 Anchor/auxiliary residues: 2 (TS), 3(DE), 4 (P), 7 (L), 9 (Y)		[Rammensee95]
p17(71-79 LAI)	GSEELRSLY	[Brander96, Birk98]
Rev(55-63 LAI)	ISERILSTY	[vanBaalen97]
Nef(66-80 BRU)	VGFPVTPQVPLRPMT	[Hadi da92]
Nef(93-106 BRU)	EKGGL EGLIHSQRR	[Hadi da92]
Nef(113-128 BRU)	WYHTQGYFPDWQNYT	[Hadi da92]
Nef(132-147 BRU)	GVRYPPLTFGW CYKLV P	[Hadi da92]
Nef(182-198 BRU)	EWRFDSRLAFHHVAREL	[Hadi da92, Hadi da95]
Nef(192-206 BRU)	HHVARELHPEYFKNC	[Hadi da92]

Table 2: **HIV HLA-A2.1 Epitopes**

Location	Epitope	Reference
RT(640-648 HXB2R)	ALQDSGLEV	[Brander96b, Brander95b]
gp120(199-207)	TLTSCN'TSV	[Brander96b]
gp160(318-327 IIIb)	RGPGRAFVTI	[Alexander-Miller96]

Table 3: **HIV HLA-A2 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (LD), C term (VL)		[Falk91, McMichael94]
HLA-A*0201 Anchor/auxiliary residues: 2 (LM), 6 (V), 9 (VL)		[Rammensee95]
HLA-A*0202 Anchor/auxiliary residues: 2 (LA), 9 (L,V)		[Rammensee97]
HLA-A*0203 Anchor/auxiliary residues: 2 (L), 9 (L)		[Rammensee97]
HLA-A*0205 Anchor/auxiliary residues: 2 (VLM), 6 (VLA), 9 (L)		[Rammensee95]
p17(69-93)	QTGSEELRS <u>L</u> YNTVAT <u>L</u> YCVHQRIE	[Johnson91]
p17(77-85 LAI)	<u>S</u> LYNTVAT <u>L</u>	[Parker92, Parker94, Tsomides94, McMichael94, Yang96, RowlandJones98, Yang97, Sipsas97, Cao97, Walter97, Stuhler97, Sewell97, Birk98, Callan98, Wagner98b, Collins98, Durall98, Kundu98, vanderBurg96, Goulder97, Wilson98, McAdam98, Goulder97e]
p17(88-115 ARV)	VHQRIEKDTKEALDKIEEEQNKSKKKA	[Ahour90]
p24(151-159)	TLNAWVKV <u>L</u>	[Parker92, Parker94]
p24(193-203 BRU)	GHQAAMQMLKE	[Claverie88]
p24(219-233 BRU)	HAGPIAPGQMRPRG	[Claverie88]
p24(263-279)	KRW <u>I</u> LGLNKIVRMYC	[Chen90]
p15(418-433 BRU)	GNFLQSRPEPTAPPF	[Claverie88, Kast94]
p15(446-460 BRU)	KEGHQMKDCTERQANF	[Claverie88]
RT(33-41)	ALVICTEM	[vanderBurg95, vanderBurg96]
Pr(75-84 MN)	VLVGP ^T PVNI	[Konya97]
RT(158-167)	SPIETVPVKL	[vanderBurg97]
RT(209-220)	LLRWGLTTPDKK	[Haas98]
RT(267-277)	VLDVGDAYFSV	[Kundu98, vanderBurg95, vanderBurg96]
RT(334-342)	VYYQYMM <u>D</u> L	[RowlandJones98]
		[Hanke98b, Hanke98c, Harret96, Haas98]

Table 3: **HIV HLA-A2 Epitopes (cont.)**

Location	Epitope	Reference
RT(334-342)	<u>IYQY</u> MD D LYY	[vanderBurg97]
RT(421-429)	PLV <u>KLWYQ</u> L	[Haas98]
RT(463-472)	<u>EIL</u> KEPVGHV	[vanderBurg97]
RT(464-472)	<u>I</u> LKEPVHG <u>V</u>	[Hanke98b, Hanke98c, Wilson98, vanderBurg95, Pogue95, Ogg98, vanderBurg96, Goulder97, Walter97, Goulder97e, Konya97, Altman96, Walter97]
		[Tsomides91, Tsomides94, Parker92, Connan94, Moss95, Yang96, Cao97, Yang97, Musey97, Ogg98, Fan97, Kundu98, RowlandJones98]
RT(464-472)	<u>I</u> LKEPVHG <u>V</u>	[Haas98]
RT(516-525)	<u>ELV</u> NQIIE <u>Q</u> L	[Brandt95]
RT(640-648 HXB2R)	<u>ALQ</u> DSGLE <u>V</u>	[Parker92, Parker94, Brandt95, Kundu98, vanderBurg96]
RT(956-964 HXB2R)	<u>L</u> LWKGEG <u>A</u> <u>V</u>	[Dadaglio91]
gp120(25-46 BRU)	LWVTVVYGGV <u>P</u> Y <u>W</u> KE <u>A</u> TT <u>L</u> FCA	[Dadaglio91]
gp120(32-41 LAD)	<u>K</u> L <u>W</u> VTVY <u>Y</u> GG <u>V</u>	[Dupuis95]
gp120(112-124 IIB)	HED <u>I</u> SLWD <u>Q</u> SL <u>K</u>	[Cleric91]
gp120(120-128 LAD)	<u>K</u> L <u>T</u> PLCV <u>L</u>	[Dupuis95, Kundu98, Kmiecik98]
gp120(193-212 BRU)	TTSY <u>T</u> L <u>T</u> SCNTSY <u>Y</u> IT <u>Q</u> ACP <u>K</u>	[Dadaglio91]
gp120(192-199 HXB2R)	<u>K</u> L <u>T</u> SCNT <u>S</u> <u>Y</u>	[Brandt95]
gp120(197-205 HXB2R)	<u>T</u> L <u>T</u> SCNT <u>S</u> <u>Y</u>	[Garboczi92, Brandt96b]
gp120(295-312 BRU)	SVEIN <u>C</u> TRP <u>N</u> NT <u>R</u> KS <u>I</u>	[Dadaglio91]
gp120(315-329 IIB)	RI <u>Q</u> R <u>G</u> P <u>R</u> A <u>F</u> VT <u>I</u> G <u>K</u>	[Dadaglio91, Cleric91, Achour93]
gp160(318-327 IIB)	R <u>G</u> P <u>R</u> A <u>F</u> VT <u>I</u>	[Achour96]
gp160(318-327 SIMI)	M <u>G</u> P <u>K</u> R <u>A</u> F <u>Y</u> A <u>T</u>	[Achour96]
gp120(377-387)	NS <u>G</u> GE <u>F</u> F <u>Y</u> S <u>N</u> S	[Hickling90]
gp120(381-392 BRU)	KN <u>C</u> GE <u>F</u> F <u>Y</u> C <u>N</u> S	[Dadaglio91]
gp120(428-443 IIB)	<u>K</u> Q <u>I</u> IN <u>M</u> <u>W</u> Q <u>E</u> V <u>G</u> K <u>A</u> M <u>Y</u>	[Cease87, Cleric91]

Table 3: **HIV HLA-A2 Epitopes (cont.)**

Location	Epitope	Reference
gp120(422-440 LAI)	KQFINMWQEVGKAMY	[Dadaglio91]
gp120(494-513 BRU)	VKIEPLGVAPTKAKRRVYQR	[Dadaglio91]
gp41(747-755)	RLVNGSLAL	[Parker92]
gp41(814-823 LAI)	SLLNATDIAV	[Dupuis95, Kundu98]
gp41(815-823 LAI)	LLNATDIAV	[Dupuis95]
gp41(815-823)	LLNATAIAV	[Kmicciak98]
gp41(834-848 IIB)	DRVIEVVQGAYRAIR	[Cleric91]
gp41(829-837 LAI)	RYIEVLRQA	[Dupuis95]
Net(73-82 LAI)	QVPLRPMTYK	[Robertson93]
Net(86-100 LAI)	DLSHFLKEKGGLEGL	[Robertson93]
Net(136-145 LAI)	PLTFGCWCYKL	[Haas96, Durall98]
Net(180-189 LAI)	VLEWRFD SRL	[Haas96, Haas97]
Net(190-198 LAI)	AFHHVAREL	[Hadida95, RowlandJones98]

Table 4: **HIV HLA-A3.1 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (IL), 3 (F), C term (KY)		
p17(18-26 LAI)	KIRLRPGGK	[DiBriano93, McMichael94]
p17(20-29)	RLRPGGKKKY	[Harrer96b]
RT(325-333)	AIFQSSMTK	[Brander95a]
gp120(37-46 LAI)	TVYYYGVPVWK	[Brander95a]
gp41(768-778 NL43)	RLRDILLIVTR	[Johnson94c, Johnson94, Hammond95]
Net(73-82 NL432)	QVPLRPMTYK	[Takahashi91]
Net(84-92 LAI)	DLSHFLKEK	[Koenig90]
		[McMichael94]

Table 5: **HIV HLA-A3 Epitopes**

Location	Epitope	Reference
HLA-A3 Anchor/auxiliary residues: 2 (LYM), 3 (FY), 6 (IMFVLT), 7 (LMF), 9 (KYP), 10 (K)		[Rammensee95]
p17(18-26 LAI)	KIRLRPGGK	[Harrer96b, Goulder97, Goulder97e]
p17(20-28)	RLRPGGKKK	[Goulder97, Goulder97e, Goulder97b, Cao97]
p17(18-31)	KIRLRPGGKKKYYKL	[Birk98, Jassoy92, Jassoy93]
RT(33-43)	ALVICTEMEK	[Haas98]
RT(192-201)	DLEIGQHRTK	[Haas98]
RT(325-333 IIB)	AIFQSSMTK	[Threlkeld97, Brandert96, Cao97]
sp120(37-46 LAI)	TVYYGVPVWK	[Goulder97, Goulder97]
sp41(768-778 NL43)	RLRDLLIVTR	[Cao97]
sp120(315-329 IIB)	RIQRGPGRAFVITGK	[Achoor93]
Nef(73-82 BRU)	QVPLRPMTYK	[Culmann91, Goulder97, Lubaki97, Durall98]
Nef(74-82 BRU)	VPLRPMTYK	[Carreno92]
Nef(190-198 LAI)	AFHHVAREK	[Hadida95]

Table 6: **HIV HLA-A11 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (L), C term (K)		
HLA-A*1101 Anchor/auxiliary residues: 2 (VIFY), 3 (MLFYIA), 7 (LIYVF), 9 (K), 10 (K), 11(K)		[Zhang93, McMichael94] [Rammensee95]
p17(84-92)	TL Y CVHQR	[Brander95a, Birk98]
p24(349-359 IIIb)	ACQGVGGPGH K	[Sipsas97]
RT(325-333 LAD)	AIFQSSMT K	[Zhang93, Johnson94b, McMichael94, Brander95a, Jaso93, Price95, Threlkeld97, Brander96, Wagner98b]
RT(342-366 LAD)	NPPDIVIYQYMDDL Y YVGS D LEIGQHR	[Walker89]
RT(507-519 LAD)	QIYQEPFKNL K KTG	[Johnson94b, Walker89]
gp120(315-329 IIIb)	RIQRGPGRA F VVTIG K	[Ahour94]
Nef(73-82 LAD)	QVPLRPMT Y K	[Cuilin91, Couillin94, Couillin95, Goulder97e]
Nef(74-82 LAD)	VPLRPMT Y K	[Zhang93]
Nef(75-82 LAD)	PLRPMT Y K	[McMichael94]
Nef(84-92 LAD)	AVDLSH E L K	[McMichael94, Couillin94, Couillin95, Goulder97e]
Nef(83-94 BRU)	AAVDLSHFLK E K	[Cuilin91]

Table 7: **HIV HLA-A19 Epitopes**

Location	Epitope	Reference
RT(71-79 LAD)	ITLWQRPLV	[Dong98]

Table 8: **HIV HLA-A24 Epitopes**

Location	Epitope	Reference
Anchor/auxiliary residues: 2 (V), 5 (IV), 6 (F), 9 (ILF)		
p17(28-36 LAI)	<u>K</u> YKLIKHW	[Rammensee95]
sp120(53-62 LAI)	LFCASCARAY	[Branders96], D. Lewinsonn pers comm
sp41(584-591 NL43)	<u>Y</u> LKDQQL	[Branders95a, Shankar96]
Nef(120-144 SF2)	YFPDWQNYTTPGPGIRYPLTFGWCYK	[Dai92] [Jassoy92]

Table 9: **HIV HLA-A25 Epitopes**

Location	Epitope	Reference
p24(203-212)	ETINEEAAEW	[vanBaalen96, Klenerman96]
Nef(182-198 LAI)	EWRFDSRLAFHHVAREL	[Cheymier92, Hadida95]

Table 10: **HIV HLA-A26 Epitopes**

Location	Epitope	Reference
p24(167-175 LAI)	EVIPMFSSAL	[Goulder96b]
p24(293-312 SF2)	RDYVVDRFYKTL	[Ogg98b]
p24(298-306)	YVDRFFKTL	[Dorrell98]
RT(593-603 IIIB)	ETFYVDGAANR	B. Walker, pers comm

Table 11: **HIV HLA-A28 or A*6802 Epitopes**

Location	Epitope	Reference
p17(127-135 Clade D)	QVSQNYPYV	[Dong98]
RT(71-79 LAI)	ITLWQRPLV	[Dong98], S. Rowland-Jones pers comm
RT(85-93 Clade D)	DTVLEEMNL	[Dong98], S. Rowland-Jones pers comm
RT(518-526 U455)	DVKQLTEVV	[Dong98], S. Rowland-Jones pers comm
RT(589-602)	IVGAETFYVDGAAS	[vanderBurg97];
RT(592-602 LAI)	AETFYVDGAAN	[Brander96], P. Johnson pers comm
RT(823-831)	ETAYFLKL	S. Rowland-Jones pers comm

Table 12: **HIV HLA-A29 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (E), 3 (F), 9 (Y)		
gp120(376-384 IIIb)	FNCGGEFFY	[Boisgerault96] [Wilson97, Brander96]

Table 13: **HIV HLA-A30 Epitopes**

Location	Epitope	Reference
gp41(852-863 HXB2)	RRIRQGLERLL	[Lieberman92]

Table 14: **HIV HLA-A31 Epitopes**

Location	Epitope	Reference
HLA-A*3101 Anchor/auxiliary residues: 2 (LVYF), 3 (FLYW), 6 (LFVD), 9 (R)		[Rammensee95]
gp41(606-614 LAI)	SYHRLRD <u>LLIV</u> TR	[Hammond95]
gp41(770-780 BH10)	RLRD <u>LLIV</u> TR	[Safrit94a, Safrit94b]

Table 15: **HIV HLA-A32 Epitopes**

Location	Epitope	Reference
RT(559-568 LAI)	PIQKETWETW	[Harrer96b]
gp120(424-432 HXB2)	RIKQINMW	[Harrer96b, Ray98]
gp41(701-720 BH10)	VLIVNRVRRQGYSPLSFQTH	[Safrit94a]

Table 16: **HIV HLA-A33 Epitopes**

Location	Epitope	Reference
HLA-A*3302 Anchor/auxiliary residues: 2 (AILFYV), 9 (R)		[Rammensee95]
p17(121-132 HXB2R)	DTGHSNQVSONY	[Buseyne93]
p24(263-277 LAI)	KRWIII <u>GLNKIV</u> MRY	[Buseyne93]
RT(325-333 LAI)	AIFQSSMTK	K. Arivoshi, unpublished

Table 17: **HIV HLA-B7 Epitopes**

Location	Epitope	Reference
Anchor residues: 1 (A), 2 (P), 3 (R), and C term (LV)		[Engelhardt93, McMichael94]
Anchor/auxiliary positions: 2 (P), 3 (R), 9 (LF)		[Rammensee95]
p24(148-156)	SP RKTLNAW	[Brander97]
p24(180-187 IIIb)	T P QDLNTM	B. Walker, per comm
p24(343-362 SF2)	LEEMMTACQGVGGPGHKARV	[McAdam98]
p24(355-363 LAI)	G PGHKARV L	[Goulder97, Goulder97e]
RT(308-320)	WKGSPAI F QSSMT	Brander95a
RT(311-319 SF2)	S PA F QSSMT	[Brander97]
RT(532-540)	YLAWVPAHK	Haas98
gp120(256-275 LAI)	R PPV S TQ L L N GSLA E EEVV	[Shankar96]
gp120(302-312 HXB2)	R PPNN T RK S I	[Safir94b, Hammond95, Wolinsky96]
gp41(848-856 LAI)	I PR R I R Q G L	[Brander95a, Cao97]
gp41(852-863 LAI)	R R I R Q GL E R L L	[Shankar96]
NeF(68-77 LAI)	F P V T P Q V P L R	[Haas96]
NeF(77-85 LAI)	R PM T Y K AA L	[Bauer97]
NeF(102-115 LAI)	H S O R R Q D L D L W I Y	[Goulder97, Goulder97e]
NeF(126-138 BRU)	N Y T P P GV R Y P L T	[Culmann91]
NeF(128-137 LAI)	T P P GV R Y P L	[Haas96, RowlandJones98]

Table 18: **HIV HLA-B8 Epitopes**

Location	Epitope	Reference
Anchor residues: 3 (K), 5 (K), and C terminus (I)		[Sutton93, Hill92, McMichael94]
Anchor/auxiliary residues: 3 (K), 5 (KR), 9 (L)		[Rammensee95]
p17(25-35 SF2)	G G K K K K Y K L K H I V	[Goulder97e, Birk98]
p17(24-32)	G G K K K K Y K L K	[Klenerman94, Klenerman95, Nowak95]

Table 18: **HIV HLA-B8 Epitopes (cont.)**

Location	Epitope	Reference
p17(24-32 LAI)	<u>G</u> <u>G</u> <u>K</u> <u>K</u> <u>K</u> <u>Y</u> <u>K</u> <u>L</u>	[Sutton93, RowlandJones93, Reid96, Price97, Goulder97c]
p17(74-82 LAI)	<u>E</u> <u>L</u> <u>R</u> <u>S</u> <u>L</u> <u>Y</u> <u>N</u> <u>T</u> <u>V</u>	[Goulder97c, Birk98]
p17(93-101)	<u>E</u> <u>I</u> <u>K</u> <u>D</u> <u>T</u> <u>K</u> <u>E</u> <u>A</u> <u>L</u>	[DiBrino94a, Brander97, Birk98]
p24(329-337 LAI)	<u>D</u> <u>C</u> <u>K</u> <u>T</u> <u>L</u> <u>K</u> <u>A</u> <u>L</u>	[Goulder97c]
p24(253-267)	<u>N</u> <u>P</u> <u>P</u> <u>I</u> <u>P</u> <u>V</u> <u>G</u> <u>E</u> <u>I</u> <u>Y</u> <u>K</u> <u>R</u> <u>W</u> <u>I</u>	[Gotch90, Nowak95, McAdam95, Phillips91, Johnson91, Goulder97e]
p24(256-270 LAI)	<u>I</u> <u>P</u> <u>V</u> <u>G</u> <u>E</u> <u>I</u> <u>Y</u> <u>K</u> <u>R</u> <u>W</u> <u>I</u> <u>L</u> <u>G</u> <u>L</u>	[Buseyne93]
p24(259-267 LAI)	<u>G</u> <u>E</u> <u>I</u> <u>Y</u> <u>K</u> <u>R</u> <u>W</u> <u>I</u>	[Sutton93, Klenerman94, Nowak95, McAdam95]
p24(259-267 LAI)	<u>E</u> <u>I</u> <u>Y</u> <u>K</u> <u>R</u> <u>W</u> <u>I</u>	[Goulder97c]
p24(313-322 LAI)	<u>V</u> <u>K</u> <u>N</u> <u>W</u> <u>M</u> <u>T</u> <u>E</u> <u>T</u> <u>L</u>	[Brander96], P. Johnson pers comm
p24(323-337)	<u>V</u> <u>Q</u> <u>N</u> <u>A</u> <u>N</u> <u>P</u> <u>D</u> <u>C</u> <u>K</u> <u>T</u> <u>L</u> <u>K</u> <u>A</u> <u>L</u>	[Nixon91, Phillips91]
p24(329-337 LAI)	<u>D</u> <u>C</u> <u>K</u> <u>T</u> <u>L</u> <u>K</u> <u>A</u> <u>L</u>	[Sutton93, Nowak95, McAdam95, Goulder97c, Goulder97e]
RT(160-184 HXB2)	<u>I</u> <u>E</u> <u>T</u> <u>V</u> <u>P</u> <u>V</u> <u>K</u> <u>L</u> <u>K</u> <u>P</u> <u>G</u> <u>M</u> <u>D</u> <u>G</u> <u>P</u> <u>K</u> <u>V</u> <u>K</u> <u>Q</u> <u>W</u> <u>P</u> <u>L</u> <u>T</u> <u>T</u> <u>E</u>	[Walker89]
RT(185-193 LAI)	<u>G</u> <u>P</u> <u>K</u> <u>V</u> <u>K</u> <u>Q</u> <u>W</u> <u>P</u> <u>L</u>	[Nixon91, Phillips91, Sutton93, Meier95, Klenerman95, Goulder97c]
gp41(586-593)	<u>Y</u> <u>L</u> <u>K</u> <u>D</u> <u>Q</u> <u>Q</u> <u>L</u>	[Dai92, Johnson92, Sutton93, Goulder97c]
gp41(852-863 HXB2)	<u>R</u> <u>R</u> <u>I</u> <u>R</u> <u>O</u> <u>G</u> <u>L</u> <u>E</u> <u>R</u> <u>L</u> <u>L</u>	[Lieberman92]
gp120(2-10 IIIB)	<u>R</u> <u>V</u> <u>K</u> <u>E</u> <u>K</u> <u>Y</u> <u>Q</u> <u>H</u> <u>L</u>	[Sipsas97]
Neft(13-20 LAI)	<u>W</u> <u>P</u> <u>T</u> <u>V</u> <u>R</u> <u>E</u> <u>R</u> <u>M</u>	[Brander96, Goulder97c]
Neft(66-80 BRU)	<u>V</u> <u>G</u> <u>F</u> <u>P</u> <u>V</u> <u>T</u> <u>P</u> <u>Q</u> <u>V</u> <u>P</u> <u>L</u> <u>R</u> <u>M</u> <u>T</u>	[Hadida92]
Neft(89-97 LAI)	<u>F</u> <u>L</u> <u>K</u> <u>E</u> <u>K</u> <u>G</u> <u>G</u> <u>L</u>	[McMichael94, Price97, Goulder97c, Hadida92]
Neft(93-106 BRU)	<u>E</u> <u>K</u> <u>G</u> <u>G</u> <u>L</u> <u>E</u> <u>G</u> <u>L</u> <u>I</u> <u>H</u> <u>S</u> <u>Q</u> <u>R</u> <u>R</u>	[Hanke98b, Hanke98c, Goulder97c]
Neft(132-147 BRU)	<u>G</u> <u>V</u> <u>R</u> <u>Y</u> <u>P</u> <u>L</u> <u>T</u> <u>F</u> <u>G</u> <u>W</u> <u>C</u> <u>Y</u> <u>K</u> <u>L</u> <u>V</u> <u>P</u>	[Hadida92]
Neft(182-198 BRU)	<u>E</u> <u>W</u> <u>R</u> <u>F</u> <u>D</u> <u>S</u> <u>R</u> <u>L</u> <u>A</u> <u>F</u> <u>H</u> <u>H</u> <u>V</u> <u>A</u> <u>R</u> <u>E</u> <u>L</u>	[Hadida92]

Table 19: **HIV HLA-B12 Epitopes**

Location	Epitope	Reference
p24(169-184 LAI)	IPMFSALSEGATPQDL	[Buseyne93]

Table 20: **HIV HLA-B13 Epitopes**

Location	Epitope	Reference
Nef(103-127 PV22)	SQRQDLDLWYHTQGYFPDWQNY	[Jassoy93]

Table 21: **HIV HLA-B14 Epitopes**

Location	Epitope	Reference
Anchor/auxiliary positions: 2 (RK), 3 (LYF), 5 (GH), 6 (IL), 9 (L)		[DiBrino94b]
Anchor/auxiliary positions: 2 (RK), 3 (LYF), 5 (RH), 6 (IL), 9 (L)		[Rammensee97]
p24(173-194 BH10)	SALSEGATPQDLNTMLNTVGGH	[Johnson91]
p24(183-191 LAI)	DLNTMLNTV	[Nixon88b, McMichael94, RowlandJones98]
p24(298-306 LAI)	DRFYKTLRA	[Brandt95a, Harrer96b, Yang96, Yang97, Cao97]
p24(305-313)	RAEQASQEV	[Price95, Lubaki97]
p24(140-159)	GQMVHQAI SPRTLNAWVKVV	[Musey97]
p24(181-189)	PQDLNTMLN	[Lubaki97]
p24(290-309)	PKEPRDYVDRFYKTLRAEQAS	[Musey97]
RT(648-672 PV22)	AIYTLALQDSGLEVNIVTDSQYALGI	[Kalamas94]
gp41(575-599 IIB)	QLQARILAVERYLKDQQLLGIWGC	[Jassoy92]
gp41(583-592 PV22)	VERYLKDQQL	[Jassoy93]
gp41(584-592 HXB2)	ERYLKDQQL	[Johnson92, Jassoy93, Kalamas94, RowlandJones98, DiBrino94b, Hammon95, Kalamas96, Yang96, Yang97, Wagnier98, Lieberman97, Sipsas97, Cao97]

Table 22: **HIV HLA-B17 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (STA), 9 (FW)		
Nef(115-125 BRU)	YHTOGYFPQWQ	[Barber97]
Nef(117-128 BRU)	TQGYFPDWN Y YT	[Culmann91]

Table 23: **HIV HLA-B18 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (DE), 9 (Y)		
gp120(32-56)	TEKLVVTV Y YGVVPWKEATTTLFC A	[Ogg98b]
Nef(134-144 LAD)	RYP L TFGWC Y K	[Johnson94c, Hammond95]
Nef(135-143)	YPLTFGWC Y	[Culmann91, Coullin94, Goulder97e] [Culmann91, CulmannPenciolelli94]

Table 24: **HIV HLA-B27 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (R) C term (KR)		
Anchor residues: 2 (R) C term (FYILW)		
HLA-B*2702 Anchor/auxiliary positions: 2 (R), 9 (FYILW)		
HLA-B*2705 Anchor/auxiliary positions: 2 (R), 9 (LFYMRHK)		
p17(18-27 LAI)	KIRLRPGGK	[Jardetzky91, McMichael94]
p17(19-27 LAI)	IRLRPGGK	[Rammensee97]
p24(160-179)	EEKAFSPPEVIPMFSALSEGA	[Rammensee95]
p24(265-280 BRU)	YKRWILGLNKIVRMYSPT	[Rammensee95]
p24(260-269 HIV-2)	RRWQLGLQK	[Brandt96, Birk98], D. Lewinsohn pers comm
p24(266-277)	KRWILGLNKIVRMV	[Brandt96], D. Lewinsohn pers comm
p24(265-276)	KRWILGLNKIV	[Musey97]
p24(263-272 LAI)	KRWILGLNK	[Dadaglio91]
		[Brandt96]
		[Nixon88, Bouillot89, Meyerhans91, Nixon90]
		[Jardetzky91, Carren92]
		[Buseyne93, Klennerman94, McMichael94, Nietfeld95, Goulder97e, RowlandJones97, Moss95, Phillips91, Fan97, Wilson98]
p24(131-139)	KRWILGLN	[RowlandJones97]
p24(263-272)	KRWIIMGNK	[Klennerman94, Nowak95, Goulder97b, Durall98, Goulder97e]
		[Musey97]
p24(160-179)	EEKAFSPPEVIPMFSALSEGA	[Musey97]
p24(265-279C)	KRWILGLNKIVRMYYC	[Bouillot89]
sp120(590-597 LAI)	RYLKDQQL	[Shankar96]
sp120(312-320 LAI)	GRAFVTIGK	[Jardetzky91]
sp41(788-809 HXB2)	IWELLGRRGWEALKYWWNLLQY	[Jardetzky91]
sp41(791-799 LAI)	GRRGWEALK	[Lieberman92]
Nef(73-82 LAI)	QVPLRPMTYK	[McMichael94], pers comm J. Liebermann
Nef(105-114 LAI)	RRQDLDLWI	[CulmannPerCom]
Nef(134-141 LAI)	KYPLTFGW	[Goulder97d]
		[CulmannPerCom]

HIV CTL Epitopes Organized by HLA Presenting Molecule

Table 25: **HIV HLA-B35 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (P), C term (Y)		[Hill92, McMichael94]
HLA-B*3501 Anchor/auxiliary residues: 2 (P), 9(YFLMD), 10 (Y)		[Rammensee95]
HLA-B*3503 Anchor/auxiliary residues: 2 (P), 9(ML)		[Steinle96]
p17(36-44 LAI)	WASRELERF	[Goulder97d, Birk98]
p17(124-132 LAI)	NSSKVSQNY	[McMichael94, RowlandJones95, Birk98]
p24(260-268 LAI)	PPVPVDIY	[McMichael94, RowlandJones95, Lalvani97]
p24(245-253 HIV-2)	NPVPGNIY	[RowlandJones95]
RT(262-270 IIB)	TVLDVGDAY	[Walkerpercom96]
RT(273-282 IIB)	VPLDEDFRKY	[Shiga96, Sipsas97]
RT(311-319 SF2)	SPAHQSSM	[Shiga96]
RT(329-337)	HPDIVIQY	[RowlandJones95, McMichael94]
RT(328-336 IIB)	NPDIVIQY	[Shiga96, Sipsas97, RowlandJones98]
RT(342-350 HIV-2)	NPDVLIQY	[RowlandJones95]
RT(448-456 SF2)	IPLTEAEFL	[Shiga96]
RT(587-597 SF2)	EPVGAETFY	[Shiga96]
gp120(42-52 PV22)	VPVWKEATTL	[Cao97]
gp120(77-85 SF2)	DPNPQEVVL	[Shiga96]
gp120(255-263 SF2)	RPVSTQLL	[Shiga96]
gp120(844-863 LAI)	YRAIRHPRRIRRQGLERILL	[Shankar96]
gp41(605-615 LAI)	TAVPWNASW	[Johnson94c, Johnson94, Hammond95, Ferris96]
Nef(72-80 SF2)	FPVRRPQVPL	[Shiga96]
Nef(73-82 BRU)	QVPLRPMTYK	[Culmann91]
Nef(73-82 LAI)	VPLRPMTY	[McMichael94, RowlandJones95, Lalvani97, RowlandJones98]
Nef(75-85 SF2)	RPQVPLRPMTY	[Shiga96]
Nef(86-100 LAI)	DLSHFLKEKGGLEGL	[Buseyne93]
Nef(139-147 SF2)	YPLTFGWCF	[Shiga96]
Nef(182-198 LAI)	EWRFDSRLAFHHVAREL	[Hadida95]
Nef(186-193 LAI)	DSRLAFHH	[Hadida95]

Table 26: **HIV HLA-B37 Epitopes**

Location	Epitope	Reference
HLA-B*3701 Anchor/auxiliary residues: 2 (DE), 5 (VI), 8 (FML), 9 (IL)		[Rammensee95]
Nef(117-128 BRU)	TQGYFPDWQNYT	[Culmann91]
Nef(120-128 LAI)	YFPDWQNYT	[CulmannPerCom]

Table 27: **HIV HLA-B38 Epitopes**

Location	Epitope	Reference
Anchor/auxiliary residues: 2 (H), 3 (DE), 9 (FL)		[Falk95]
HLA-B*3801 Anchor/auxiliary residues: 2 (H), 3 (DE), 9 (FL)		[Rammensee97]
gp120 (53-62 LAI)	LFCASCARKAY	[Shankar96]

Table 28: **HIV HLA-B42 Epitopes**

Location	Epitope	Reference
p17(20-29 IIIB)	RLRPGGKKKY	[Walkerpercom96]
RT(437-446 IIIB)	IYPGIKVRQL	[Walkerpercom96]

Table 29: **HIV HLA-B44 Epitopes**

Location	Epitope	Reference
Anchor/auxiliary residues: 2 (E), 3 (I), 4 (P), 6 (Y), 9 (Y)		[Rammensee97]
p24(306-316 LAI)	AEQASQDVKNW	[Brandner97]
RT(358-367 LAI)	EELRQHLLRW	[vanderBurg97]
RT(552-561 LAI)	TWETWWTXYW	[vanderBurg97]
gp120(29-39)	AAENLWYTVVYY	[Borrow97, Goulder97e]

Table 30: **HIV HLA-B51 Epitopes**

Location	Epitope	Reference
HLA-B5101 Anchor/auxiliary residues: 2 (APG), 9 (FI)		[Rammensee95]
HLA-B5102 Anchor/auxiliary residues: 2 (PAG), 3 (Y), 9 (IV)		[Rammensee95]
HLA-B5103 Anchor/auxiliary residues: 2 (APG), 3 (Y), 9 (VIF)		[Rammensee95]
HLA-B51 Anchor/auxiliary residues: 2 (P), 3 or 4 (VL), 9 (VLI)		[Connan94]
p24(325-333 IIIB)	NANPPDCKTI	[Walkerpercom96]
RT(42-50)	EKEGKISKI	[Has98]
RT(448-456 SF2)	IPLTTEEABL	[Shiga96]
RT(295-302 IIIB)	TAFTPSI	[Sipsas97]
RT(587-596 SF2)	EPYVGAFTF	[Shiga96]
gp120(77-85 SF2)	DPNPQEVVL	[Shiga96]
gp41(557-565 IIIB)	RAIEAQQHL	[Sipsas97]
Nef(186-194 BRU)	DSRLAFHHY	[Connan94]

Table 31: **HIV HLA-B52 Epitopes**

Location	Epitope	Reference
HLA-B*5201 Anchor/auxiliary residues: 2 (Q), 3 (FYI), 5 (LIV), 8 (IV), 9 (IV)		[Rammensee95]
p24(194-202 LAI)	HQAAMQMLK	[Brander96], P. Goulder, pers comm
p24(273-282 IIB)	IVRMYSPTSI	B. Walker, pers comm
Nef(188-196 LAI)	RLAFHHVAR	[Hadida95]
Nef(190-198 LAI)	AFHHVAREL	[Hadida95]

Table 32: **HIV HLA-B53 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (P), C term (YFW)		[Hill92, McMichael94]
HLA-B*5301 Anchor/auxiliary residues: 2 (P)		[Rammensee97]
p17(173-181 HIV-2)	TPYDINQML	[Gotch93]

Table 33: **HIV HLA-B55 Epitopes**

Location	Epitope	Reference
HLA-B*5501 Anchor/auxiliary residues: 2 (P)		[Rammensee97]
HLA-B*5502 Anchor/auxiliary residues: 2 (P)		[Rammensee97]
p24(215-223 IIB)	VHPVHAGPIA	[Sipsas97]
gp120(42-51 PV22)	VPVWKEATTT	[Brander95a]

Table 34: **HIV HLA-B57 Epitopes**

Location	Epitope	Reference
p24(147-155 PV22)	ISPRTLNAW	[Goulder96]
p24(162-172 LAI)	KAFSPVEVPMF	[Goulder96]
p24(240-249)	TSTLQEQIGW	[Goulder96]
p24(309-317 LAI)	QASQEVK NW	[Goulder96]
Nef(116-125 BRU)	HTQGYPFDWQ	[Culmann91]
Nef(130-143 LAI)	GPGVRYPLTFGW CY	[Goulder96]
Nef(133-148 LAI)	VRYPLTFGW CY KLVPV	[Brander96],P. Goulder per. comm.

Table 35: **HIV HLA-B58 Epitopes**

Location	Epitope	Reference
Anchor/auxiliary residues: 2(AST), 4 (PEK), 5 (VILMF), 9 (FW)		
Anchor/auxiliary residues B*5801: 2(AST), 4 (PEK), 5 (VILMF), 9 (FW)		
p24(105-114)	TSTLQEQIGW	[Goulder96]
p24(147-155 IIIB)	ISPRTLNAW	[Goulder96]
p24(181-192)	CTPYDINQMLNC	[BertolottiPerComm98]
p24(241-250)	TSTVEEQQW	[BertolottiPerComm98]

Table 36: **HIV HLA-B62 Epitopes**

Location	Epitope	Reference
Anchor/auxiliary residues: 2(QL), 5 (IV), 9 (FY)		
p17(18-31)	KIRLRPGGKKK YKL	[Lubaki97]
p17(77-85)	SLYNTVATL	[Goulder97e]
p24(271-281)	LGLNKIVRMYS	[Lubaki97, Goulder97e]

Table 37: **HIV HLA-Bw52 Epitopes**

Location	Epitope	Reference
p24(193-214 BH10)	GHQAAMQMLKETINEEAAEWDR	[Johnson91]

Table 38: **HIV HLA-Bw57 Epitopes**

Location	Epitope	Reference
p24(143-164 BH10)	VHQAISPRRLNAWVKVVEEKAF	[Johnson91]
p24(153-174 BH10)	NAWVKVVEEKAFSPEVIPMFA	[Johnson91]

Table 39: **HIV HLA-Bw60 Epitopes**

Location	Epitope	Reference
RT(359-383 HXB2)	DLEIGQHRTKIEELRQHLLRWGLTT	[Walker89]

Table 40: **HIV HLA-Bw62 Epitopes**

Location	Epitope	Reference
p17(18-42 BH10)	KIRLRPGGKKK YKLKHIVWASRELE	[Johnson91]
p17(20-29 LAI)	RLRPGGKKKY	[McMichael94]
p24(263-284 BH10)	KRWIII.GLNKIVRMYSPTSILD	[Johnson91]
p24(265-284 SF2)	KRWIII.GLNKIVRMYSPTSI	[vanBaalen93]
p24(268-277 LAI)	LGLNKIVRMY	[McMichael94]
RT(415-426 IIB)	LVGKLNWASQIY	[Brandt96], P. Johnson per. comm.
RT(476-485 LAI)	ILKEPVIHGVIY	[Johnson91, McMichael94]
Nef(118-127 LAI)	QGYFPDPWQNY	[McMichael94]

Table 41: **HIV HLA-Cw1 Epitopes**

Location	Epitope	Reference
p24(168-175 LAI)	VIPMFSAL	[Goulder97f]

Table 42: **HIV HLA-Cw3 Epitopes**

Location	Epitope	Reference
HLA-Cw*0301 Anchor/auxiliary residues: 3 (VIYLM), 4 (P), 6 (FY), 9 (LFMD)	GQMVVHQAISPRTL	[Rammensee95]
p24(140-152 IIIB)		[Litana91]

Table 43: **HIV HLA-Cw4 Epitopes**

Location	Epitope	Reference
Anchor residues: 2 (YPF), C term (FLM)		[Falk94, McMichael94]
HLA-Cw*0401 Anchor/auxiliary residues: 2 (YPF), 6 (VIL), 9 (LFM)		[Rammensee95]
gp120(376-383 HXB2R)	SENNCGGEFF	[Johnson93, Wolinsky96, Wilson97]

Table 44: **HIV HLA-Cw8 Epitopes**

Location	Epitope	Reference
p24(305-313)	RAEQASQEV	[Johnson91, RowlandJones98]
		Note: Originally reported as B14, but not presented by B14 transfected cells
		Due to the linkage disequilibrium of Cw8 and B14, the restriction element was unclear
gp120(156-165 IIIB)	NCSFNISTSI	[Sipasas97]
gp120(241-249 LAI)	CTNVSTVQC	[Sipasas97]
RT(663-672 IIIB)	VTDSDQYALGI	Cw8 [Brandt96, RowlandJones98]
		Note: Originally reported here in 1995 as B14, but not presented by B14 transfected cells