Table 1: **p17**

	MAb ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
1	L14.17	p17(11–25)	p17(11–25 BRU)	GELDRWEKIRLRPGG	no	Inactivated BRU	murine(IgG)
	References: [Tatsumi (1990), Robert-Hebmann (1992b), Robert-Hebmann (1992a)]						
2	HyHIV-1	p17(12–29)	p17(12–29 JMH1)	ELDKWEKIRLRPGGKTLY	no	rec p17	murine(IgG_1)
	References: [Liu (1995), Ota & Ueda(1998)]						
	• HyHIV-1: This paper compares the results of affinity constant (K_a) measurements of anti-p17 MAbs using double Ab methods versus the faster, isotope-free BIAcore system, and results were found to be similar for HyHIV-(1-6) – six MAbs all bind to the first α helix of p17, a functional domain for both membrane binding and nuclear localization [Ota & Ueda(1998)]						
3	HyHIV-2	p17(12–29)	p17(12–29 JMH1)	ELDKWEKIRLRPGGKTLY	no	rec p17	murine(IgG_1)
	References: [Liu (1995), Ota & Ueda(1998)]						
	• HyHIV-2: This paper compares the results of affinity constant (K_a) measurements of anti-p17 MAbs using double Ab methods versus the faster, isotope-free BIAcore system, and results were found to be similar for HyHIV-(1-6) – six MAbs all bind to the first α helix of p17, a functional domain for both membrane binding and nuclear localization [Ota & Ueda(1998)]						
4	HyHIV-3	p17(12–29)	p17(12–29 JMH1)	ELDKWEKIRLRPGGKTLY	no	rec p17	murine(IgG_1)
	References: [Liu (1995), Ota & Ueda(1998)]						
	• HyHIV-3: This paper compares the results of affinity constant (K_a) measurements of anti-p17 MAbs using double Ab methods versus the faster, isotope-free BIAcore system, and results were found to be similar for HyHIV-(1-6) – six MAbs all bind to the first α helix of p17, a functional domain for both membrane binding and nuclear localization [Ota & Ueda(1998)]						
5	HyHIV-4	p17(12–29)	p17(12–29 JMH1)	ELDKWEKIRLRPGGKTLY?	no	rec p17	murine(IgG_1)
	References: [Liu (1995), Ota (1998), Ota & Ueda(1998)]						
	• HyHIV-4: epitope uncertain, based on the best estimate from JMH1 sequence – K_a is 1.8×10^7 M^{-1} for rec p17 – stains the surface of infected cells indicating the antigen is exposed at the cell surface [Ota (1998)]						
	• HyHIV-4: This paper compares the results of affinity constant (K_a) measurements of anti-p17 MAbs using double Ab methods versus the faster, isotope-free BIAcore system, and results were found to be similar for HyHIV-(1-6) – six MAbs all bind to the first α helix of p17, a functional domain for both membrane binding and nuclear localization [Ota & Ueda(1998)]						

	MAb ID	HXB2 Location	Author's Location	Sequence	Neutral-izing	Immunogen	Species (Isotype)
6	HyHIV-5	p17(12–29)	p17(12–29 JMH1)	ELDKWEKIRLRPGGKTLY	no	rec p17	murine(IgG_1)
	References: [Liu (1995), Ota & Ueda(1998)]						
	• HyHIV-5: This paper compares the results of affinity constant (K_a) measurements of anti-p17 MAbs using double Ab methods versus the faster, isotope-free BIAcore system, and results were found to be similar for HyHIV-(1-6) – six MAbs all bind to the first α helix of p17, a functional domain for both membrane binding and nuclear localization [Ota & Ueda(1998)]						
7	HyHIV-6	p17(12–29)	p17(12–29 JMH1)	ELDKWEKIRLRPGGKTLY	no	rec p17	murine(IgG_1)
	References: [Liu (1995), Ota & Ueda(1998)]						
	• HyHIV-6: This paper compares the results of affinity constant (K_a) measurements of anti-p17 MAbs using double Ab methods versus the faster, isotope-free BIAcore system, and results were found to be similar for HyHIV-(1-6) – six MAbs all bind to the first α helix of p17, a functional domain for both membrane binding and nuclear localization [Ota & Ueda(1998)]						
8	32/1.24.89	p17(17–22)	p17(17–22 IIIB)	EKIRLR	L	Viral lysate	murine(IgG)
	References: [Papsidero (1989)]						
	• 32/1.24.89: Inhibited infectivity of cell free virus [Papsidero (1989)]						
9	3E11	p17(19–38)	p17(19–38 SIVmac)	IRLPGGKKKYMLKHVVWAA	no	Inact AGMTYO-7	murine(IgG_1)
	References: [Otteken (1992), Nilsen (1996)]						
	• 3E11: There is another MAb with this ID that recognizes integrase [Nilsen (1996)]						
	• 3E11: Recognized an epitope present on HIV-2/SIVmac (MAC251/32H), SIVagm, HIV-1, and SIVmnd, demonstrating that the matrix protein of all nine HIV and SIV isolates tested in this study expresses at least one highly conserved immunogenic epitope [Otteken (1992)]						
10	3B10	p17(19–38)	p17(19–38 SIVmac)	IRLPGGKKKYMLKHVVWAA	no	Inact AGMTYO-7	murine(IgG_1)
	References: [Otteken (1992)]						
	• 3B10: Recognized an epitope present on HIV-2/SIVmac (MAC251/32H) , SIVagm, HIV-1, and SIVmnd, demonstrating that the matrix protein of all nine HIV and SIV isolates tested in this study expresses at least one conserved immunogenic epitope recognized serologically [Otteken (1992)]						

Table of HIV MAbs

	MAb ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
11	HyHIV-21	p17(30–52)	p17(30–52 JMH1)	KLKHIIWASRELERFAVNPGLLE	no	rec p17	murine(IgG_{2a})
	References: [Liu (1995), Ota (1998)]						
	• HyHIV-21: epitope uncertain, based on the best estimate from JMH1 sequence – K_a is 3.6×10^6 M^{-1} for rec p17 – stains the surface of infected cells indicating the antigen is exposed at the cell surface –inhibited growth of HIV-1 JMH1 in MT-4 cells when added 24 hours after the initial culture [Ota (1998)]						
12	8H10	p17(30–52)	p17(30–52 JMH-1)	KLKHIVWASRELERFAVNPGL-LE		p17 aa 30–52 peptide linked to BSA	murine(IgM)
	References: [Ota (1999), Ota & Ueda(1999)]						
	• 8H10: The p17 MAb also can bind to the V3 loop [Ota (1999)]						
	• 8H10: Inhibits viral replication of the HIV-1 infected MT-4 cells by decreasing p17 DNA levels in the infected cells, and the effect of growing the 8H10 hybridoma in co-culture with HIV-1 infected MT-4 cells was studied [Ota & Ueda(1999)]						
13	-B4f8	p17(51–65)	p17(51–65)	LETSEGCRQILGQLQ	no	IIIB lysate	rat(IgG_{2a})
	References: [Shang (1991)]						
	• -B4f8: Did not bind live infected cells, only cells that had been made permeable with acetone [Shang (1991)]						
14	12H-D3b3	p17(62–78)	p17(62–78)	GQLQPSLQTGSEELRSL	no	IIIB lysate	rat(IgG_{2a})
	References: [Shang (1991)]						
	• 12H-D3b3: Did not bind live infected cells, only cells that had been made permeable with acetone [Shang (1991)]						
15	12G-A8g2	p17(86–115)	p17(86–115)	YCVHQRIEIKDTKEALDKIEE-EQNKSKKKA	no	IIIB lysate	rat(IgG_{2a})
	References: [Shang (1991)]						
	• 12G-A8g2: Bound to 30-mer, but not to internal peptides – did not bind live infected cells – antigenic domain known as HPG30 [Shang (1991)]						
16	12G-D7h11	p17(86–115)	p17(86–115)	YCVHQRIEIKDTKEALDKIEE-EQNKSKKKA	no	IIIB lysate	rat(IgG_{2a})
	References: [Shang (1991)]						
	• 12G-D7h11: Bound to 30-mer, but not to internal peptides – did not bind live infected cells – antigenic domain known as HPG30 [Shang (1991)]						

	MAb ID	HXB2 Location	Author's Location	Sequence	Neutral-izing	Immunogen	Species (Isotype)
17	12I-D12g2	p17(86–115)	p17(86–115)	YCVHQRIEIKDTKEALDKIEE-EQNKSKKKA	no	IIIB lysate	rat(IgG_{2a})
	References: [Shang (1991)]						
	• 12I-D12g2: Bound to 30-mer, but not to internal peptides – did not bind live infected cells – antigenic domain known as HPG30 [Shang (1991)]						
18	12G-H1c7	p17(86–115)	p17(86–115)	YCVHQRIEIKDTKEALDKIEE-EQNKSKKKA	no	IIIB lysate	rat(IgG)
	References: [Shang (1991)]						
	• 12G-H1c7: Bound to 30-mer, but not to internal peptides – did not bind live infected cells – antigenic domain known as HPG30 [Shang (1991)]						
19	polyclonal	p17(86–115)	p17(86–115)	YSVHQRIDVKDTKEALEKIEE-EQNKSKKKA	L	peptide, oral, cholera toxin adjuvant	murine(IgA)
	References: [Bukawa (1995)]						
	• Polyclonal secretory IgA antibody raised by mucosal immunization is able to neutralize IIIB, SF2, and MN – HIV-1 neutralization may be due to the V3, CD4 or HPG30 component of the multicomponent peptide immunogen [Bukawa (1995)]						
20	HyHIV-15	p17(87–115)	p17(87–115 JMH1)		L	rec p17	murine(IgG_1)
	References: [Liu (1995), Ota (1998)]						
	• HyHIV-15: epitope uncertain, based on the best estimate from JMH1 sequence – K_a is 1.4×10^7 M^{-1} for rec p17 – stains the surface of infected cells indicating the antigen is exposed at the cell surface – inhibited growth of HIV-1 JMH1 in MT-4 cells when added 24 hours after the initial culture [Ota (1998)]						
21	11H9	p17(101–115)	p17(101–115 SF2)	LEKIEEEQNKSKKKA?		Inact CBL-1	murine(IgG_1)
	Donor: R. B. Ferns and R. S. Tedder						
	References: [Ferns (1987), Ferns (1989)]						
	• 11H9: Reactive against p18 and p55 [Ferns (1987)]						
	• 11H9: UK Medical Research Council AIDS reagent: ARP344						
22	C5126	p17(113–122)	p17(113–122 HXB2)	KKAQQAAADT	no	Inact HIV lysate	murine($IgG_1\kappa$)
	References: [Hinkula (1990)]						
	• C5126: Defined epitope by peptide blocking of binding to native protein – WB reactive with p53 and p17 [Hinkula (1990)]						

Table of HIV MAbs

	MAb ID	HXB2 Location	Author's Location	Sequence	Neutral-izing	Immunogen	Species (Isotype)
23	3-H-7	p17(113–122)	p17(113–122 BH10)	KKAQQAAADT	L	IIIB	murine(IgG)
	References: [Niedrig (1989), Robert-Hebmann (1992b), Robert-Hebmann (1992a), Levin (1997)] • 3-H-7: No cross-reactivity with HIV-2 ROD or SIV MAC by immunoblot [Niedrig (1989)] • 3-H-7: Called 3H7 – using a bicistronic vector, an intracellular Fab intrabody, 3H7, can inhibit HIV-1 infection when expressed in the cytoplasm of dividing CD4+ T cells – HXBIIIB and SI primary isolate virions from 3H7 expressing cells were far less infectious – 3H7 intrabody acts both at the stage of nuclear import and virus particle assembly [Levin (1997)]						
24	4H2B1	p17(119–132)	p17(121–134 SF2)	AAGTGNSSQVSQNY		Inact CBL-1	murine(IgG_1)
	Donor: R. B. Ferns and R. S. Tedder **References:** [Ferns (1987), Ferns (1989)] • 4H2B1: Reactive against p18 and p55 of multiple isolates [Ferns (1987)] • 4H2B1: UK Medical Research Council AIDS reagent: ARP315						
25	1D9	p17(119–132)	p17(121–134 SF2)	AAGTGNSSQVSQNY		Inact CBL-1	murine(IgG_{2a})
	Donor: R. B. Ferns and R. S. Tedder **References:** [Ferns (1987), Ferns (1989)] • 1D9: Reactive against p18, but not p55 [Ferns (1987)] • 1D9: UK Medical Research Council AIDS reagent: ARP316						
26	4C9	p17(119–132)	p18(121–134 SF2)	AAGTGNSSQVSQNY		Inact CBL-1	murine(IgG_{2a})
	Donor: R. B. Ferns and R. S. Tedder **References:** [Ferns (1987), Ferns (1989)] • 4C9: Reactive against p18, but not p55 [Ferns (1987)] • 4C9: UK Medical Research Council AIDS reagent: ARP342						
27	9G5	p17(119–132)	p17(121–134 SF2)	AAGTGNSSQVSQNY		Inact CBL-1	murine(IgM)
	Donor: R. B. Ferns and R. S. Tedder **References:** [Ferns (1987), Ferns (1989)] • 9G5: Reactive against p18, but not p55 [Ferns (1987)] • 9G5: UK Medical Research Council AIDS reagent: ARP343						
28	31-11	p17(121–132)	p17(121–132 BRU)	DTGHSSQVSQNY	no	BRU	murine(IgG)
	References: [Robert-Hebmann (1992b), Robert-Hebmann (1992a)]						

	MAb ID	HXB2 Location	Author's Location	Sequence	Neutral-izing	Immunogen	Species (Isotype)
29	15-21	p17(121–132)	p17(121–132 BRU)	DTGHSSQVSQNY	no	BRU	murine(IgG)
	References: [Robert-Hebmann (1992b), Robert-Hebmann (1992a)]						
30	sc-FV p17	p17(121–132)	p17(121–132 BRU)	DTGHSSQVSQNY	L	BRU	murine($IgG_1\kappa$)
	Donor: Paul Zhou, NIH, Bethesda, MD, USA **References:** [Robert-Hebmann (1992a), Tewari (1998)] • A single chain Ab (sc-FV) was made from an anti-p17 MAb, and intracellular binding of sc-FV resulted in inhibition of viral replication that was more pronounced when the sc-FV was expressed in the cytoplasm instead of the nucleus [Tewari (1998)]						