Table 10: gp41

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
626	5F3	gp41(526-543 BH10)	gp41(15-33)	AAGSTMGAASMTLTVQ-ARQ	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Buchacher et al.(1994)] **NOTES:** • 5F3: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells [Buchacher et al.(1994)]						
627	25C2	gp41(526-543 BH10)	gp41(15-33)	AAGSTMGAASMTLTVQ-ARQ	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX **References:** [Buchacher et al.(1992), Buchacher et al.(1994), Sattentau et al.(1995)] **NOTES:** • 25C2: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells – binds oligomeric and monomeric gp41, and gp160 [Buchacher et al.(1994)] • 25C2: Called IAM 41-25C2 – Binding domain overlaps sites that are critical for gp120-gp41 association g**S**t**M** – binding is enhanced by sCD4 – binding region defined as: gp41(21-38 BH10) [Sattentau et al.(1995)]						
628	24G3	gp41(526-543 BH10)	gp41(15-33)	AAGSTMGAASMTLTVQ-ARQ	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Buchacher et al.(1992), Buchacher et al.(1994)] **NOTES:** • 24G3: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells [Buchacher et al.(1994)]						
629	1A1	gp41(526-543 BH10)	gp41(15-33)	AAGSTMGAASMTLTVQ-ARQ	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Buchacher et al.(1994)] **NOTES:** • 1A1: Human MAb generated using EBV transformation of PBL from HIV-1+ volunteers [Buchacher et al.(1994)]						
630	α(566-586)	gp41(566-586 BRU)	gp41(51-71)	AQQHLLQLTVWGIKQLQ-ARIL		HIV-1 infection	human
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Poumbourios et al.(1992)]						

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
631	PC5009	gp41(577-596 BRU)	gp41(62-81)	GIKQLQARILAVERYLK-DQQ		rgp160	murine
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Poumbourios et al.(1992)] **NOTES:** • PC5009: Recognized only monomeric gp41 [Poumbourios et al.(1992)]						
632	polyclonal α(577-596)	gp41(577-596 BRU)	gp41(62-81)	GIKQLQARILAVERYLK-DQQ		HIV-1 infection	human plasma
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Poumbourios et al.(1992)] **NOTES:** • α(577-596): Affinity purified from HIV-1+ plasma – preferentially bind oligomer [Poumbourios et al.(1992)]						
633	polyclonal	gp41(583-604)	gp41(69-89)	RILAVERYLKDQQLLGI-WGCS	N	desialylated HIV-1 gp160	rabbit sera
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Benjouad et al.(1993)] **NOTES:** • MAbs raised against desialylated HIV-1 gp160 cross-react with HIV-2 gp140 due to immunodominant conserved epitope in gp41 [Benjouad et al.(1993)]						
634	polyclonal	gp41(584-602)	gp41(70-87)	ILAVERYLKDQQLLGIWG	N	HIV-1 infection	human sera
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Petrov et al.(1990)] **NOTES:** • Immunodominant and broadly reactive peptide [Petrov et al.(1990)]						
635	V10-9	gp41(586-620 IIIB)	gp41(70-103)	ILAVERYLKDQQLLGIW-GCSGKLICTTAVPWNAS	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria **References:** [Robinson Jr. et al.(1990a), Robinson Jr. et al.(1990b)] **NOTES:** • V10-9: Antibody dependent enhancement (ADE) of HIV-1 IIIB infectivity, synergistically enhanced by MAb 120-16 [Robinson Jr. et al.(1990a)] • V10-9: Peptide 586-620 blocks complement mediated ADE [Robinson Jr. et al.(1990b)]						

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
636	86	gp41(586-620 IIIB)	gp41(69-103)	RILAVERYLKDQQLLGI-WGCSGKLICTTAVPWNAS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: Evan Hersh and Yoh-Ichi Matsumoto
References: [Sugano et al.(1988), Robinson Jr. et al.(1990a), Robinson Jr. et al.(1990b), Pincus et al.(1991), Moran et al.(1993), Wisnewski et al.(1996), Mitchell et al.(1998)]
NOTES:

- 86: Also called No. 86
- 86: Reacts with gp41 and also reacted weakly with gp120 [Sugano et al.(1988)]
- 86: Antibody dependent enhancement (ADE) of HIV-1 IIIB infectivity in the presence of complement [Robinson Jr. et al.(1990a)]
- 86: Peptide 586-620 blocks complement mediated ADE [Robinson Jr. et al.(1990b)]
- 86: Poor immunotoxin activity when coupled to RAC – peptide binding stated to be aa 579-603 [Pincus et al.(1991)]
- 86: Heavy (V_HI) and light (V_κI) chain sequenced – enhancing activity – similar germline sequence to MAb S1-1, but very different activity [Moran et al.(1993)]
- 86: 86 is V_H1 – V-region heavy chain usage was examined and a bias of enhanced V_H1 and V_H4, and reduced V_H3, was noted among HIV infected individuals [Wisnewski et al.(1996)]
- 86: Mutations in BH10 gp160, W596Y and T605A, as well as deletions of 605-609 (TTAVP) and 597-609 (GCS-GKLICTTAVP), abrogate binding of enhancing MAbs 86, 240D, 50-69, and 246-D – 5/6 enhancing MAbs identified to date bind to the immunodominant region 579-613 [Mitchell et al.(1998)]
- 86: NIH AIDS Research and Reference Reagent Program: 380

637	polyclonal	gp41(74-94 ?)	gp41	ERYLKDQLLGIWGCSGK-LIC		HIV-1 infection	human sera

Donor: Evan Hersh and Yoh-Ichi Matsumoto
References: [Shafferman et al.(1989)]
NOTES:

- Immunogenic domain useful for diagnostics [Shafferman et al.(1989)]

638	41-6	gp41(598-609)	gp41(88-94)	CSGKLIC		peptide LGLIWGC-SGKLIC (aa 598-609)	murine(IgG_{2b})

Donor: Evan Hersh and Yoh-Ichi Matsumoto
References: [Oldstone et al.(1991)]
NOTES:

- 41-6: Poor cross-reactivity with HIV-2 peptide CAFRQVC – slightly more reactive with LGLIWGCSGKLIC and HIV-2 form NSWGCAFRQVC – disulfide bond between cysteines required [Oldstone et al.(1991)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
639	4	gp41(598-609)	gp41(88-94)	CSGKLIC		peptide LGLIWGC-SGKLIC (aa 598-609)	murine(IgG_{2b})

Donor: Evan Hersh and Yoh-Ichi Matsumoto
References: [Oldstone et al.(1991)]
NOTES:
- 4: There is another MAb with this ID that reacts with integrase [Oldstone et al.(1991), Bizub-Bender et al.(1994)]
- 4: Poor cross-reactivity with HIV-2 peptide CAFRQVC – slightly more reactive with longer HIV-2 peptide NSWG-CAFRQVC [Oldstone et al.(1991)]

640	75	gp41(598-609)	gp41(88-94)	CSGKLIC		peptide LGLIWGC-SGKLIC (aa 598-609)	rat(IgG)

Donor: Evan Hersh and Yoh-Ichi Matsumoto
References: [Oldstone et al.(1991)]
NOTES:
- 75: Poor cross-reactivity with HIV-2 peptide CAFRQVC – more reactive with longer HIV-2 peptide NSWG-CAFRQVC [Oldstone et al.(1991)]

641	68.1	gp41(598-609)	gp41(88-94)	CSGKLIC		peptide LGLIWGC-SGKLIC (aa 598-609)	murine(IgM)

Donor: Evan Hersh and Yoh-Ichi Matsumoto
References: [Oldstone et al.(1991)]
NOTES:
- 68.1: Cross-reactive with HIV-2 peptide CAFRQVC – more reactive with longer HIV-1 peptide LGLIWGCSGKLIC and HIV-2 peptide NSWGCAFRQVC [Oldstone et al.(1991)]

642	68.11	gp41(598-609)	gp41(88-94)	CSGKLIC		peptide LGLIWGC-SGKLIC (aa 598-609)	murine(IgM)

Donor: Evan Hersh and Yoh-Ichi Matsumoto
References: [Oldstone et al.(1991)]
NOTES:
- 68.11: Cross-reactive with HIV-2 peptide CAFRQVC – more reactive with longer HIV-1 peptide LGLIWGCSGKLIC and HIV-2 peptide NSWGCAFRQVC [Oldstone et al.(1991)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
643	115.8	gp41(598-609)	gp41(82-94)	LGLIWGCSGKLIC		peptide LGLIWGC-SGKLIC (aa 598-609)	murine(IgM)
		Donor: Evan Hersh and Yoh-Ichi Matsumoto **References:** [Oldstone et al.(1991)] **NOTES:** • 115.8: Poor reactivity with CSGKLIC – reacts well with longer HIV-2 peptide NSWGCAFRQVC as well as CAFRQVC – disulfide bond between cysteines required [Oldstone et al.(1991)]					
644	M-22	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_{2b})
		Donor: ? **References:** [Yamada et al.(1991)] **NOTES:** • M-22: Strongest reaction of 12 anti-HIV-1 gp41 MAbs to a cellular 43-kDa protein found in rat and human astrocytes [Yamada et al.(1991)]					
645	M-24	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_1)
		Donor: ? **References:** [Yamada et al.(1991)] **NOTES:** • M-24: Strongly reacted with a cellular 43-kDa protein found in rat and human astrocytes as well as with gp41 [Yamada et al.(1991)]					
646	M-28	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_1)
		Donor: ? **References:** [Yamada et al.(1991)] **NOTES:** • M-28: Strongly reacted with a cellular 43-kDa protein found in rat and human astrocytes as well as with gp41 [Yamada et al.(1991)]					
647	M-2	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_{2b})
		Donor: ? **References:** [Yamada et al.(1991)] **NOTES:** • M-2: Strongly reacted with a cellular 43-kDa protein found in rat and human astrocytes as well as with gp41 [Yamada et al.(1991)]					

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
648	M-11	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_1)

Donor: ?
References: [Yamada et al.(1991)]
NOTES:
- M-11: Strongly reacted with a cellular 43-kDa protein found in rat and human astrocytes as well as with gp41 [Yamada et al.(1991)]

649	M-13	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_{2b})

Donor: ?
References: [Yamada et al.(1991)]
NOTES:
- M-13: Reacted with a cellular 43-kDa protein found in rat and human astrocytes as well as with gp41 [Yamada et al.(1991)]

650	M-25	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_1)

Donor: ?
References: [Yamada et al.(1991)]
NOTES:
- M-25: Reacted with a cellular 43-kDa protein found in rat and human astrocytes as well as with gp41 [Yamada et al.(1991)]

651	M-1	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine($IgG_{1 or 2b}$)

Donor: ?
References: [Yamada et al.(1991)]
NOTES:
- M-1: Unlike M-22, did not react to 43-kDa protein found in rat and human astrocytes [Yamada et al.(1991)]

652	M-4	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_{2b})

Donor: ?
References: [Yamada et al.(1991)]
NOTES:
- M-4: Unlike M-22, did not react to 43-kDa protein found in rat and human astrocytes [Yamada et al.(1991)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
653	M-6	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_{2b})
		Donor: ? **References:** [Yamada et al.(1991)] **NOTES:** • M-6: Unlike M-22, did not react to 43-kDa protein found in rat and human astrocytes [Yamada et al.(1991)]					
654	M-29	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_1)
		Donor: ? **References:** [Yamada et al.(1991)] **NOTES:** • M-29: Unlike M-22, did not react to 43-kDa protein found in rat and human astrocytes [Yamada et al.(1991)]					
655	M-36	gp41(598-609)	gp41(83-94)	LGIWGCSGKLIC		HIV-1 gp41 peptide (aa 598-609)	murine(IgG_1)
		Donor: ? **References:** [Yamada et al.(1991)] **NOTES:** • M-36: Unlike M-22, did not react to 43-kDa protein found in rat and human astrocytes [Yamada et al.(1991)]					
656	1B8.env	gp41(594-605 HXB2)	gp41(84-94)	GIWGCSGKLIC	N	HIV-1 infection	human($IgG_{2\lambda}$)
		Donor: ? **References:** [Banapour et al.(1987)] **NOTES:** • 1B8.env: Highly conserved epitope recognized by the majority of HIV-1 infected people [Banapour et al.(1987)]					
657	polyclonal α(598-609)	gp41(598-609)	gp41(84-91)	GIWGCSGK		HIV-1 infection	human
		Donor: ? **References:** [Poumbourios et al.(1992)] **NOTES:** • α(598-609): Affinity purified from HIV-1+ plasma – immunodominant region, binds oligomer and monomer [Poumbourios et al.(1992)]					

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
658	clone 3	gp41	gp41(87-96)	GCSGKLICTT	L	HIV-1 infection	human(IgG_1)

Donor: ?
References: [Cotropia et al.(1992), Cotropia et al.(1996)]
NOTES:
- clone 3: Core binding domain gcsgkLIC – lack of serological activity to this region correlates with rapid progression in infants ([Broliden et al.(1989)]) [Cotropia et al.(1992)]
- clone 3: Inhibits replication of three diverse HIV-1 laboratory strains, as well as an AZT-resistant isolate [Cotropia et al.(1996)]

659	polyclonal	gp41(601-616)	gp41(84-99)	GIWGCSGKLICTTAVP	N	HIV-1 infection	human sera

Donor: ?
References: [Petrov et al.(1990)]
NOTES:
- Immunodominant and broadly reactive peptide [Petrov et al.(1990)]

660	41-7	gp41(605-611)	gp41(88-94)	CSGKLIC	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: ?
References: [Bugge et al.(1990)]
NOTES:
- 41-7: Sera from 6/6 HIV-1 positive, but no HIV-2 positive, individuals interfered with 41-7 binding [Bugge et al.(1990)]

661	2A2/26	gp41(584-606 BRU)	gp41(69-91)	RILAVERYLKDQQLLGI-WGCSGK		viral gp41	murine(IgG)

Donor: ?
References: [Poumbourios et al.(1992), Poumbourios et al.(1995)]
NOTES:
- 2A2/26: Immunodominant region, binds both oligomer and monomer [Poumbourios et al.(1992)]
- 2A2/26: Δ 550-561 (Δ LLRAIEAQQHLL), a region important for oligomer formation diminishes binding, Δ (550-561 +571-581) abrogates binding [Poumbourios et al.(1995)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
662	98-43	gp41(579-604 HXB2)	gp41(69-94)	RILAVERYLKDQQLLGI-WGCSGKLIC	N	HIV-1 infection	human($IgG_{2\kappa}$)

Donor: ?
References: [Pinter et al.(1989), Gorny et al.(1989), Tyler et al.(1990), Xu et al.(1991)]
NOTES:
- 98-43: Reacts equally well with oligomer and monomer [Pinter et al.(1989)]
- 98-43: Poor ADCC (in contrast to MAb 120-16, gp41(644-663)) [Tyler et al.(1990)]
- 98-43: 579-604 binds in the immunodominant region [Xu et al.(1991)]
- 98-43: NIH AIDS Research and Reference Reagent Program: 1241

663	181-D	gp41(591-597 HXB2)	gp41(81-87)	QLLGIWG	N	HIV-1 infection	human($IgG_{2\kappa}$)

Donor: ?
References: [Xu et al.(1991), Robinson Jr. et al.(1991), Eddleston et al.(1993), Forthal et al.(1995), Fontenot et al.(1995)]
NOTES:
- 181-D: Fine mapping indicates core is LLGIW [Xu et al.(1991)]
- 181-D: No enhancing or neutralization activity [Robinson Jr. et al.(1991)]
- 181-D: Called SZ-181.D [Eddleston et al.(1993)]
- 181-D: No neutralizing, no ADCC, and no viral enhancing activity [Forthal et al.(1995)]

664	240-D	gp41(592-600 HXB2)	gp41(82-90)	LLGIWGCSG	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: ?
References: [Xu et al.(1991), Robinson Jr. et al.(1991), Spear et al.(1993), Binley et al.(1996), Wisnewski et al.(1995), Wisnewski et al.(1996), Mitchell et al.(1998)]
NOTES:
- 240-D: Fine mapping indicates core is IWG [Xu et al.(1991)]
- 240-D: No neutralizing activity, some enhancing activity [Robinson Jr. et al.(1991)]
- 240-D: Did not mediate deposition of complement component C3 on HIV infected cells [Spear et al.(1993)]
- 240-D: Binds to a linear epitope located in the Cluster I region – binding of 50-69 and 240-D inhibited by Fabs A1, A4, M8B, M26B, M12B and T2 [Binley et al.(1996)]
- 240-D: Called F240: F240 in V_H3 – V-region heavy chain usage was examined and a bias of enhanced V_H1 and V_H4, and reduced V_H3, was noted among HIV infected individuals [Wisnewski et al.(1996)]
- 240-D: Mutations in BH10 gp160, W596Y and T605A, as well as deletions of 605-609 (TTAVP) and 597-609 (GCSGKLICTTAVP), abrogate binding of enhancing MAbs 86, 240D, 50-69, and 246-D – 5/6 enhancing MAbs identified to date bind to the immunodominant region 579-613 [Mitchell et al.(1998)]
- 240-D: NIH AIDS Research and Reference Reagent Program: 1242

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
665	D61	gp41(592-608 HXB2)	gp41(82-98)	LLGIWGCSGKLICTTAV		dimeric Env	murine

Donor: ?

References: [Earl et al.(1994), Richardson Jr et al.(1996), Weissenhorn et al.(1996), Earl et al.(1997)]

NOTES:

- D61: Linear gp41 epitope in the cluster I region – human sera blocked binding in oligomeric ELISA assay to a similar extent for gp41 MAbs D20, D43, D61, and T4 [Richardson Jr et al.(1996)]
- D61: Does not precipitate gp41(21-166), but due to a structural difference in the disulfide bonding region near the two cysteines – the authors propose that this region may change conformation during the activation of the membrane fusion state of the HIV-1 glycoprotein [Weissenhorn et al.(1996)]
- D61: Binding maps to region 597-613: WGCSGKLICTTAVPWNA – immunodominant region containing two Cys residues – this antibody, along with human MAb 246-D, can be blocked by any of a group of 8 conformational MAbs (M10, D41, D54, T4, T6, T9, T10 and T35) – members of this competition group are blocked by sera from HIV-1+ individuals [Earl et al.(1997)]

666	D49	gp41(597-613)	gp41(82-98)	LLGIWGCSGKLICTTAV		dimeric Env	murine

Donor: ?

References: [Earl et al.(1994), Earl et al.(1997)]

NOTES:

- D49: Binding maps to region 597-613: WGCSGKLICTTAVPWNA – immunodominant region containing two Cys residues [Earl et al.(1997)]

667	T32	gp41(597-613)	gp41(82-98)	LLGIWGCSGKLICTTAV		tetrameric Env	murine

Donor: ?

References: [Earl et al.(1994), Earl et al.(1997)]

NOTES:

- T32: Binding maps to region 597-613: WGCSGKLICTTAVPWNA – immunodominant region containing two Cys residues [Earl et al.(1997)]

668	T34	gp41(597-613)	gp41(82-98)	LLGIWGCSGKLICTTAV		tetrameric Env	murine

Donor: ?

References: [Earl et al.(1994), Earl et al.(1997)]

NOTES:

- T34: Binding maps to region 597-613: WGCSGKLICTTAVPWNA – immunodominant region containing two Cys residues [Earl et al.(1997)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
669	246-D	gp41(579-604 HXB2)	gp41(80-87)	QQLLGIWG	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: Susan Zolla-Pazner, NYU Med Center, NY, NY

References: [Xu et al.(1991), Robinson Jr. et al.(1991), Spear et al.(1993), Eddleston et al.(1993), Forthal et al.(1995), Manca et al.(1995), Saarloos et al.(1995), Earl et al.(1997)]

NOTES:

- 246-D: Fine mapping indicates core is LLGI [Xu et al.(1991)]
- 246-D: Did not mediate deposition of complement component C3 on HIV infected cells unless cells were pre-incubated with sCD4 [Spear et al.(1993)]
- 246-D: No neutralizing activity, some enhancing activity [Robinson Jr. et al.(1991)]
- 246-D: Called SZ-246.D [Eddleston et al.(1993)]
- 246-D: No neutralizing activity, both ADCC and viral enhancing activity [Forthal et al.(1995)]
- 246-D: Virions complexed to gp41 Ab facilitate presentation of p66 RT epitopes to Th cells [Manca et al.(1995)]
- 246-D: Ab-mediated activation of complement on HIV+ cells is higher than Ab independent activation – what has been termed “Ab independent” in fact results in part from IgM in normal human serum that is HIV-cross-reactive [Saarloos et al.(1995)]
- 246-D: Mutations in BH10 gp160, W596Y and T605A, as well as deletions of 605-609 (TTAVP) and 597-609 (GCSGKLICTTAVP), abrogate binding of enhancing MAbs 86, 240D, 50-69, and 246-D – 5/6 enhancing MAbs identified to date bind to the immunodominant region 579-613 [Mitchell et al.(1998)]
- 246-D: This antibody, along with murine MAb D61, can be blocked by any of a group of 8 conformational MAbs (M10, D41, D54, T4, T6, T9, T10 and T35) [Earl et al.(1997)]
- 246-D: NIH AIDS Research and Reference Reagent Program: 1245

670	2F11	gp41(HXB2)	gp41(79-90)	DQQLLGIWGCSG	N	HIV-1 infection	human(IgG_1)

Donor: ?

References: [Eaton et al.(1994)]

NOTES:

- 2F11: Enhances infectivity even in the absence of complement – does not mediate ADCC or neutralize virus [Eaton et al.(1994)]

671	1H5	gp41(579-613 BH10)	gp41(68-102)	ARILAVERYLKDQQLLG-IWGCSGKLICTTAVPWNA	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: ?

References: [Buchacher et al.(1992), Buchacher et al.(1994)]

NOTES:

- 1H5: Generated by electrofusion of PBL from HIV-1 positive volunteers with CB-F7 cells [Buchacher et al.(1994)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
672	1F11	gp41(579-613 BH10)	gp41(68-102)	ARILAVERYLKDQQLLG-IWGCSGKLICTTAVPWNA	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria
References: [Buchacher et al.(1992), Buchacher et al.(1994)]
NOTES:
- 1F11: Generated by electrofusion of PBL from HIV-1 positive volunteers with CB-F7 cells [Buchacher et al.(1994)]

673	4D4	gp41(579-613 BH10)	gp41(68-102)	ARILAVERYLKDQQLLG-IWGCSGKLICTTAVPWNA	N	HIV-1 infection	human($IgG_{1\lambda}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX
References: [Buchacher et al.(1992), Buchacher et al.(1994), Chen et al.(1994b), Sattentau et al.(1995)]
NOTES:
- 4D4: Generated by electrofusion of PBL from HIV-1 positive volunteers with CB-F7 cells [Buchacher et al.(1994)]

674	3D9	gp41(579-613 BH10)	gp41(68-102)	ARILAVERYLKDQQLLG-IWGCSGKLICTTAVPWNA	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria
References: [Buchacher et al.(1992), Buchacher et al.(1994)]
NOTES:
- 3D9: Generated by electrofusion of PBL from HIV-1 positive volunteers with CB-F7 cells [Buchacher et al.(1994)]

675	4G2	gp41(579-613 BH10)	gp41(68-102)	ARILAVERYLKDQQLLG-IWGCSGKLICTTAVPWNA	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria
References: [Buchacher et al.(1992), Buchacher et al.(1994)]
NOTES:
- 4G2: Generated by electrofusion of PBL from HIV-1 positive volunteers with CB-F7 cells [Buchacher et al.(1994)]

676	4B3	gp41(579-613 BH10)	gp41(68-102)	ARILAVERYLKDQQLLG-IWGCSGKLICTTAVPWNA	N	HIV-1 infection	human($IgG_{1\lambda}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria
References: [Buchacher et al.(1992), Buchacher et al.(1994), Chen et al.(1994b)]
NOTES:
- 4B3: Generated by electrofusion of PBL from HIV-1 positive volunteers with CB-F7 cells [Buchacher et al.(1994)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
677	50-69	gp41(579-603 BH10)	gp41(69-93)	RILAVERYLKDQQLLGI-WGCSGKLI	N	HIV-1 infection	human($IgG_{2\kappa}$)

Donor: Susan Zolla-Pazner, NYU, NY

References: [Till et al.(1989), Pinter et al.(1989), Gorny et al.(1989), Xu et al.(1991), Robinson Jr. et al.(1991), Sattentau & Moore(1991), Eddleston et al.(1993), Spear et al.(1993), Laal et al.(1994), Chen et al.(1995), Sattentau et al.(1995), Manca et al.(1995), McDougal et al.(1996), Poignard et al.(1996a), Binley et al.(1996), Klasse & Sattentau(1996), Stamatatos et al.(1997), Boots et al.(1997), Mitchell et al.(1998)]

NOTES:

- 50-69: Combined with deglycosylated A chain of ricin is toxic to lines of HIV-infected T cells (H9) and monocytes (U937) [Till et al.(1989)]
- 50-69: Reacts preferentially with gp160 oligomer, compared to gp41 monomer [Pinter et al.(1989)]
- 50-69: Kills HIV-infected cells when coupled to deglycosylated ricin A chain [Gorny et al.(1989)]
- 50-69: The epitope is affected by the conformation conferred by the two cysteines at amino acids 598 and 604 [Xu et al.(1991)]
- 50-69: Enhances HIV-1 infection in vitro – synergizes with huMAb 120-16 *in vitro* to enhance HIV-1 infection to level approaching that found in polyclonal anti-HIV serum [Robinson Jr. et al.(1991)]
- 50-69: Two fold increase in binding to gp120 in the presence of bound sCD4 [Sattentau & Moore(1991)]
- 50-69: Called SZ-50.69 – binds to an epitope within aa 579-613 [Eddleston et al.(1993)]
- 50-69: Did not mediate deposition of complement component C3 on HIV infected cells unless cells were pre-incubated with sCD4 – complement mediated virolysis of MN and IIIB in the presence of sCD4 [Spear et al.(1993)]
- 50-69: Epitope described as Cluster I, 601-604, conformational – does not neutralize IIIB or synergize neutralization by anti-V3 MAb 447-52D or by CD4 BS MAbs [Laal et al.(1994)]
- 50-69: One of several anti-gp41 MAbs that bind to a gp41-maltose binding fusion protein designed to study the leucine zipper domain of gp41, showing that the construct has retained aspects of normal gp41 conformation [Chen et al.(1995)]
- 50-69: Preferentially binds oligomer – binding increased after pretreatment of infected cells with sCD4 – binding domain overlaps site that is critical for gp120-gp41 association, avEry [Sattentau et al.(1995)]
- 50-69: Virions complexed to gp41 Ab facilitate presentation of p66 RT epitopes to Th cells [Manca et al.(1995)]
- 50-69: Does not neutralize HIV-1 LAI [McDougal et al.(1996)]
- 50-69: Prebinding of anti-V3, and CD4i MAbs 48d and 17b, but not anti-V2 neutralizing MAbs, expose the 50-69 epitope [Poignard et al.(1996a)]
- 50-69: Binds to a linear epitope located in the Cluster I region – binding of 50-69 and 240-D inhibited by Fabs A1, A4, M8B, M26B, M12B and T2 [Binley et al.(1996)]
- 50-69: Used to test exposure of gp41 upon sCD4 binding [Klasse & Sattentau(1996)]
- 50-69: Binding of anti-gp120 MAbs IgG1b12 or 654-30D does not mediate significant exposure of the gp41 epitopes for MAbs 2F5 and 50-69 [Stamatatos et al.(1997)]

677 cont.

- 50-69: Abs that recognize discontinuous epitopes can identify mimotopes from a phage peptide display library – 50-69 maps to an immunodominant domain in gp41 – three groups of peptides were selected, one which seems most closely related to gp41 sequence peptide consensus is WGCxx(RK)(x_n)LxC – the analogous gp41 sequence WGCSGKLIC is present in most M group clades, except D with a common L to H substitution [Boots et al.(1997)]
- 50-69: Mutations in BH10 gp160, W596Y and T605A, as well as deletions of 605-609 (TTAVP) and 597-609 (GCSGKLICTTAVP), abrogate binding of enhancing MAbs 86, 240D, 50-69, and 246-D – 5/6 enhancing MAbs identified to date bind to the immunodominant region 579-613 – identifies non-contiguous W596-G597-C598...C604-T605 as minimal epitope [Mitchell et al.(1998)]
- 50-69: NIH AIDS Research and Reference Reagent Program: 531

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
678	Fab A1	gp41(584-609 LAI)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: Susan Zolla-Pazner, NYU, NY
References: [Binley et al.(1996)]
NOTES:
- Fab A1: Binds to Cluster I region – competes with MAbs 240-D and 50-69 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

679	Fab A4	gp41(584-609 LAI)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: Susan Zolla-Pazner, NYU, NY
References: [Binley et al.(1996)]
NOTES:
- Fab A4: Binds to Cluster I region – competes with MAbs 240-D and 50-69 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

680	Fab M8B	gp41(584-609 LAI)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: Susan Zolla-Pazner, NYU, NY
References: [Binley et al.(1996)]
NOTES:
- Fab M8B: Binds to Cluster I region – competes with MAbs 240-D and 50-69 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
681	Fab M26B	gp41(584-609 LAI)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: Susan Zolla-Pazner, NYU, NY **References:** [Binley et al.(1996)] **NOTES:** • Fab M26B: Binds to Cluster I region – competes with MAbs 240-D and 50-69 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]						
682	Fab T2	gp41(584-609 LAI)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: Susan Zolla-Pazner, NYU, NY **References:** [Binley et al.(1996)] **NOTES:** • Fab T2: Binds to Cluster I region – competes with MAbs 240-D and 50-69 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]						
683	Fab M12B	gp41(584-609 LAI)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: Susan Zolla-Pazner, NYU, NY **References:** [Binley et al.(1996)] **NOTES:** • Fab M12B: Binds to Cluster I region – competes with MAbs 240-D and 50-69 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]						
684	41.4	gp41(584-609)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV			
	Donor: Jan McClure, Bristol-Myers Squibb Pharmaceutical Res Inst, Seattle, WA **References:** [Pincus & McClure(1993)] **NOTES:** • 41.4: Binds to peptide weakly, but to gp160 with higher affinity than 41.1, and cross-competes with 41.1 – probably conformational – MAb was coupled to ricin A chain (RAC) – sCD4 enhances the efficacy of immunotoxins in vitro 30-fold [Pincus & McClure(1993)]						

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
685	41-1	gp41(584-609)	gp41(69-98)	RILAVERYLKDQQLLGI-WGCSGKLICTTAV		gp160	murine($IgG_{1\kappa}$)

Donor: Jan McClure, Bristol-Myers Squibb Pharmaceutical Res Inst, Seattle, WA
References: [Gosting et al.(1987), Dalgleish et al.(1988), Pincus et al.(1991), Pincus & McClure(1993), Mani et al.(1994), Pincus et al.(1996), Pincus et al.(1998)]
NOTES:

- 41-1: This antibody gp41(584-609) [Mani et al.(1994)] seems to have been named the same as a different MAb to gp41(735-752 IIIB) [Dalgleish et al.(1988)]
- 41-1: Also called 41.1, although possibly not, the literature is confusing because two gp41 MAbs that bind to this region with similar names (dash versus period) are listed as murine and human
- 41-1: Broadly reactive [Gosting et al.(1987)]
- 41-1: This antibody seems to have been named the same as a different MAb to gp41(735-752) [Dalgleish et al.(1988)]
- 41-1: Efficacious as an immunotoxin when coupled to RAC – gave linear epitope as gp160 579-603 [Pincus et al.(1991)]
- 41-1: Called 41.1, and described as a human MAb – cross-competes with 41.4 – sCD4 enhances the efficacy of immunotoxins in vitro 30-fold – MAb was coupled to ricin A chain (RAC) – [Pincus & McClure(1993)]
- 41-1: Did not require the C-C disulfide bridge and loop formation, can bind simultaneously with 9-11 [Mani et al.(1994)]
- 41-1: Called 41.1, and described as a human MAb, binding 579-604 – a panel of immunotoxins was generated by linking Env MAbs to ricin A – immunotoxins mediated cell killing, but killing was not directly proportional to binding [Pincus et al.(1996)]

686	9-11	gp41(584-609)	gp41(69-94)	RILAVERYLKDQQLLGI-WGCSGKLIC		gp160	murine(IgG_1)

Donor: Jan McClure, Bristol-Myers Squibb Pharmaceutical Res Inst, Seattle, WA
References: [Mani et al.(1994)]
NOTES:

- 9-11: required the C-C disulfide bridge and loop formation, can bind simultaneously with 41-1 [Mani et al.(1994)]

687	polyclonal	gp41(589-596)	gp41 (72-79)	AVERYLKD		HIV-1 infection	human sera

Donor: Jan McClure, Bristol-Myers Squibb Pharmaceutical Res Inst, Seattle, WA
References: [Klasse et al.(1991)]
NOTES:

- Substitutions and deletions in peptide 583-599 were systematically studied – alterations in AVERYLKD abrogated the antigenicity of peptides with most of 14 human sera [Klasse et al.(1991)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
688	polyclonal	gp41(583-599)	gp41 (66-82)	LQARILAVERYLKDQQL		HIV-1 infection	human sera

Donor: Jan McClure, Bristol-Myers Squibb Pharmaceutical Res Inst, Seattle, WA
References: [Klasse et al.(1993b)]
NOTES:
- 42 HIV-1 positive human sera were tested against WT peptide, and peptide with substitution 589 A to T: 11/42 reacted strongly with WT, weakly with A589T – 31 reacted weakly with parental, even more weakly with substituted [Klasse et al.(1993b)]

689	9G5A	gp41(596-599 IIIB)	gp41 (81-84)	QLLG		Anti-idiotype against M38	murine(IgM)

Donor: Jan McClure, Bristol-Myers Squibb Pharmaceutical Res Inst, Seattle, WA
References: [Lopalco et al.(1993), Beretta & Dalgleish(1994)]
NOTES:
- 9G5A: Anti-idiotype to gp120 C terminus (C5 region) MAb M38 [Lopalco et al.(1993)]

690	3D6	gp41(604-617 BH10)	gp41(89-103)	SGKLICTTAVPWNAS		HIV-1 infection	human($IgG_{1\kappa}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX
References: [Felgenhauer et al.(1990), He et al.(1992), Chen et al.(1994b), Sattentau et al.(1995), Wisnewski et al.(1996)]
NOTES:
- 3D6: Sequence of cDNA encoding V- regions [Felgenhauer et al.(1990)]
- 3D6: Fab fragment crystal structure [He et al.(1992)]
- 3D6: This MAb binds to HIV gp41, and to a 43 kd protein found in human T, B and monocyte cell lines, proposed molecular mimicry [Chen et al.(1994b)]
- 3D6: Called IAM 41-3D6: binding increased after pretreatment of infected cells with sCD4 – binding domain overlaps site that is critical for gp120-gp41 association, ctta**V** [Sattentau et al.(1995)]
- 3D6: 3D6 is V_H3 – V-region heavy chain usage was examined and a bias of enhanced V_H1 and V_H4, and reduced V_H3, was noted among HIV infected individuals [Wisnewski et al.(1996)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
691	120-16	gp41(644-663 HXB2)	gp41(134-153)	SLIEESQNQQEKNEQEL-LEL	N	HIV-1 infection	human($IgG_{2\kappa}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX
References: [Andris et al.(1992), Robinson Jr. et al.(1990a), Tyler et al.(1990), Xu et al.(1991), Robinson Jr. et al.(1991), Eddleston et al.(1993), Forthal et al.(1995), Wisnewski et al.(1996)]
NOTES:

- 120-16: Also called SZ-120.16
- 120-16: Antibody dependent enhancement (ADE) of HIV-1 IIIB infectivity, synergistically enhanced by MAb V10-9 [Robinson Jr. et al.(1990a)]
- 120-16: Potent ADCC (in contrast to MAb 98-43, gp41(579-604)) [Tyler et al.(1990)]
- 120-16: Less reactive region than AVERY region – most Abs involving this region bound conformational epitopes, this was the only linear one [Xu et al.(1991)]
- 120-16: Synergizes with huMAb 50-69 in vitro to enhance HIV-1 infection [Robinson Jr. et al.(1991)]
- 120-16: Called SZ-120.16 [Eddleston et al.(1993)]
- 120-16: No neutralizing activity, both ADCC and viral enhancing activity [Forthal et al.(1995)]
- 120-16: 120-16 is V_H4 – V-region heavy chain usage was examined and a bias of enhanced V_H1 and V_H4, and reduced V_H3, was noted among HIV infected individuals [Wisnewski et al.(1996)]

692	D50	gp41(642-665)	gp41(132-155)	DISCONTINUOUS		dimeric Env	murine

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX
References: [Earl et al.(1994), Binley et al.(1996), Richardson Jr et al.(1996), Earl et al.(1997)]
NOTES:

- D50: Thought to be a discontinuous epitope recognizing residues between 649-668 – designated cluster II – Fabs D5, D11, G1, T3, M12, M15, S6, S8, S9, S10 block binding [Binley et al.(1996)]
- D50: Richardson suggests this is a linear gp41 epitope [Richardson Jr et al.(1996)]
- D50: Found to bind to a linear peptide, between env amino acids 642-655 – can be blocked by the conformation dependent MAbs D16, D17, D31, D36, D37, D40, D44, D55, D59, T37, and T45 – the region is in the immunogenic cluster two region – reactive with 9/10 HIV-1 strains tested, all except HIV-1 ADA, in which the change E659D and E662A may result in the loss of binding (ELLE to DLLA) [Earl et al.(1997)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
693	98-6	gp41(644-663 HXB2)	gp41(134-153)	SLIEESQNQQEKNEQEL-LEL	N	HIV-1 infection	human($IgG_{2\kappa}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX

References: [Pinter et al.(1989), Gorny et al.(1989), Till et al.(1989), Robinson Jr. et al.(1990a), Tyler et al.(1990), Andris et al.(1992), Sattentau & Moore(1991), Robinson Jr. et al.(1991), Xu et al.(1991), Eddleston et al.(1993), Spear et al.(1993), Tani et al.(1994), Laal et al.(1994), Chen et al.(1995), Forthal et al.(1995), Manca et al.(1995), Sattentau et al.(1995), Wisnewski et al.(1996)]

NOTES:

- 98-6: Reacts preferentially with gp160 oligomer, compared to gp41 monomer [Pinter et al.(1989)]
- 98-6: Kills HIV-infected cells when coupled to deglycosylated ricin A chain [Gorny et al.(1989)]
- 98-6: Toxic to HIV-infected T cells (H9) and monocytes (U937) when coupled to deglycosylated A chain of ricin [Till et al.(1989)]
- 98-6: No neutralizing or enhancing activity for HIV-1 IIIB [Robinson Jr. et al.(1990a)]
- 98-6: Serves as target for antibody-dependent cellular cytotoxicity, ADCC [Tyler et al.(1990)]
- 98-6: Two fold increase in binding to gp120 in the presence of bound sCD4 [Sattentau & Moore(1991)]
- 98-6: No neutralizing or enhancing activity [Robinson Jr. et al.(1991)]
- 98-6: Appeared to be specific for a conformational or discontinuous epitope [Xu et al.(1991)]
- 98-6: Called SZ-98.6 – binds to a conformational domain within aa 644-663 of gp41, and reacts with astrocytes, as do 167-7 and ND-15G1 [Eddleston et al.(1993)]
- 98-6: Did not mediate deposition of complement component C3 on HIV infected cells, binding enhanced by sCD4 [Spear et al.(1993)]
- 98-6: This MAb was expressed as a surface anti-gp41 monoclonal antibody receptor for gp41 on a CD4-negative B-cell line. Transfected cells could bind HIV envelope, but could not be infected by HIV-1. When CD4 delivered by retroviral constructs was expressed on these cells, they acquired the ability to replicate HIV-1, and sIg/gp41 specifically enhanced viral replication [Tani et al.(1994)]
- 98-6: Epitope described as Cluster II, 644-663, conformational – does not neutralize IIIB or synergize neutralization by anti-V3 MAb 447-52D or by CD4 BS MAbs [Laal et al.(1994)]
- 98-6: One of several anti-gp41 MAbs that bind to a gp41-maltose binding fusion protein designed to study the leucine zipper domain of gp41, showing that the construct has retained aspects of normal gp41 conformation [Chen et al.(1995)]
- 98-6: No neutralizing activity, positive ADCC activity, and no viral enhancing activity [Forthal et al.(1995)]
- 98-6: Virions complexed to gp41 Ab facilitate presentation of p66 RT epitopes to Th cells [Manca et al.(1995)]
- 98-6: Preferentially recognizes oligomeric form of gp41 – enhanced binding to HIV-1 infected cells at 37 degrees relative to 4 degrees – addition of sCD4 enhances binding [Sattentau et al.(1995)]
- 98-6: 98-6 is V_H4 – V-region heavy chain usage was examined and a bias of enhanced V_H1 and V_H4, and reduced V_H3, was noted among HIV infected individuals [Wisnewski et al.(1996)]
- 98-6: NIH AIDS Research and Reference Reagent Program: 1240

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
694	167-7	gp41(644-663)	gp41(134-153)	SLIEESQNQQEKNEQEL-LEL		HIV-1 infection	human($IgG_{2\lambda}$)

Donor: H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX
References: [Xu et al.(1991), Eddleston et al.(1993)]
NOTES:
- 167-7: Specific for a conformational epitope [Xu et al.(1991)]
- 167-7: Called SZ-167.7 – binds to a conformational domain within aa 644-663 of gp41, and reacts with astrocytes, as do 98-6 and ND-15G1 [Eddleston et al.(1993)]

695	ND-15G1	gp41(644-663 HXB2)	gp41(134-153)	SLIEESQNQQEKNEQEL-LEL		HIV-1 infection	human($IgG_{1\kappa}$)

Donor: ?
References: [Eddleston et al.(1993)]
NOTES:
- ND-15G1: Mapped to the conformational epitope within aa 644-663, and reacts with astrocytes, as do 98-6 and 167-7 [Eddleston et al.(1993)]

696	167-D	gp41(644-663 HXB2)	gp41(134-153)	SLIEESQNQQEKNEQEL-LEL	N	HIV-1 infection	human($IgG_{1\lambda}$)

Donor: ?
References: [Spear et al.(1993), Forthal et al.(1995), Manca et al.(1995)]
NOTES:
- 167-D: Did not mediate deposition of complement component C3 on HIV infected cells – complement mediated virolysis of MN and IIIB in the presence of sCD4 [Spear et al.(1993)]
- 167-D: No neutralizing activity, no ADCC activity, and no viral enhancing activity [Forthal et al.(1995)]
- 167-D: Virions complexed to gp41 Ab facilitate presentation of p66 RT epitopes to Th cells [Manca et al.(1995)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
697	2F5	gp41(662-667 BH10)	gp41(152-157)	ELDKWA	L P	HIV-1 infection	human($IgG_{3\kappa}$)

Donor: Hermann Katinger, U. of Bodenkultur, or Polymun Scientific Inc., Vienna, Austria; Viral Testing Systems, Houston, TX, USA

References: [Buchacher et al.(1992), Muster et al.(1993), Allaway et al.(1993), Klasse et al.(1993a), Purtscher et al.(1994), Laal et al.(1994), Buchacher et al.(1994), D'Souza et al.(1994), Conley et al.(1994b), Thali et al.(1994), Chen et al.(1994b), Muster et al.(1994), Beretta & Dalgleish(1994), D'Souza et al.(1995), Trkola et al.(1995), Sattentau et al.(1995), Moore & Ho(1995), Neurath et al.(1995), Kessler 2nd et al.(1995), Calarota et al.(1996), McKeating(1996), Poignard et al.(1996b), Sattentau(1996), Conley et al.(1996), Pincus et al.(1996), McKeating et al.(1996), Stoiber et al.(1996), Purtscher et al.(1996), Schutten et al.(1997), D'Souza et al.(1997), Mo et al.(1997), Li et al.(1997), Kessler II et al.(1997), Moore & Trkola(1997), Mascola et al.(1997), Stamatatos et al.(1997), Turbica et al.(1997), Ugolini et al.(1997), Burton & Montefiori(1997), Earl et al.(1997), Andrus et al.(1998), Mondor et al.(1998), Connor et al.(1998), Yang et al.(1998), Trkola et al.(1998), Fouts et al.(1998), Ernst et al.(1998), Takefman et al.(1998), Li et al.(1998)]

NOTES:

- 2F5: Also called IAM 2F5, IAM-41-2F5, IAM2F5
- 2F5: DKWA defined as the core sequence – highly conserved epitope neutralizing MAb [Buchacher et al.(1992), Muster et al.(1993)]
- 2F5: Synergy with combinations of CD4-based molecules in inhibition of HIV-1 Env mediated cell fusion [Allaway et al.(1993)]
- 2F5: Called IAM-41-2F5 – reports MAb to be IgG_1 – the gp41 mutation 582(Ala to Thr) results in conformational changes in gp120 that confer neutralization resistance to conformationally sensitive neutralizing MAbs – neutralization efficiency of 2F5 is not affected [Klasse et al.(1993a)]
- 2F5: Broadly reactive neutralizing activity, ELDKWA is relatively conserved – neutralized 2 primary isolates [Purtscher et al.(1994)]
- 2F5: Failed to show synergy with anti-CD4 binding site IIIB neutralizing antibodies [Laal et al.(1994)]
- 2F5: MAb generated by electrofusion of PBL from HIV-1 positive volunteers with CB-F7 cells [Buchacher et al.(1994)]
- 2F5: Included in a multi-lab study for antibody characterization binding and neutralization assay comparison [D'Souza et al.(1994)]
- 2F5: Called IAM-41-2F5 – neutralized lab and primary isolates – $t_{1/2}$ dissociation 122 min for the peptide, and 156 min for gp41 – core D(K/R)W – Ab resistant isolate had the sequence KLDNWA [Conley et al.(1994b)]
- 2F5: gp41 mutation (582 A/T) that reduces neutralization of anti-CD4 binding site MAbs does not alter 2F5's ability to neutralize [Thali et al.(1994)]
- 2F5: 2F5 epitope ELDKWA inserted into an immunogenic loop in influenza virus hemagglutinin can elicit IIIB, MN and RF neutralizing sera in immunized mice [Muster et al.(1994)]
- 2F5: Found to neutralize MN, JRCSF, and two B subtype primary isolates, but not a D subtype primary isolate, by most labs in a multi-laboratory study involving 11 labs [D'Souza et al.(1995)]
- 2F5: Cross-clade primary virus neutralizing activity – LDKW defined as the core epitope [Trkola et al.(1995)]

697 cont.

- 2F5: Called IAM 41-2F5 – exposed in the presence of gp120 on the cell surface, while most of gp41 is masked – binds proximal to transmembrane region [Sattentau et al.(1995)]
- 2F5: Review: binds to the only generally accepted strong neutralizing epitope outside of gp120, one of only 3 MAbs with strong broad activity against primary viruses, the others are 2G12 and IgG1b12 – unique member of epitope cluster [Moore & Ho(1995)] and John Moore, per comm 1996
- 2F5: MAb binding decreases the accessibility or alters the conformation of the gp41 fusion domain and of gp120 domains, including the binding site for the CD4 cell receptor [Neurath et al.(1995)]
- 2F5: Broad cross-clade neutralization of primary isolates – additive neutralization in combination with anti-CD4BS MAb IgG1b12 (Called BM12) [Kessler 2nd et al.(1995)]
- 2F5: Only 4/20 Argentinian and 3/43 Swedish HIV+ sera reacted with LLELDKWASL – sera reacting with peptides that contained ELDKWA tended to have high neutralization titers – the region carboxyl terminal to EDLKWA was found to be more important for polyclonal sera AB binding, 670-675 WNWFDI – 2F5 bound most strongly to the peptide QELLELDKWA [Calarota et al.(1996)]
- 2F5: ELDKWAS is in a gp41 binding region for the negative regulator of complement factor H (CFH) – Abs to HIV generally do not cause efficient complement-mediated lysis, but binding of 2F5 can interfere with CHF binding, facilitating HIV destruction by complement [Stoiber et al.(1996)]
- 2F5: Primary isolates from clade A, B, and E are neutralized by 2F5 – neutralization requires the LDKW motif – neutralization resistant isolates or 2F5 selected variants all had substitutions in the D or K [Purtscher et al.(1996)]
- 2F5: Neutralizes HXB2, primary isolates, and chimeric virus with gp120 from primary isolates in an HXB2 background [McKeating et al.(1996)]
- 2F5: Review: one of three MAbs (IgG1b12, 2G12, and 2F5) generally accepted as having significant potency against primary isolates [Poignard et al.(1996b)]
- 2F5: Review: only four epitopes have been described which can stimulate a useful neutralizing response to a broad spectrum of primary isolates, represented by the binding sites of MAbs: 447-52-D, 2G12, Fab b12, and 2F5 [Sattentau(1996)]
- 2F5: 2F5 was infused into two chimpanzees which were then given an intravenous challenge with a primary HIV-1 isolate – both became infected, but with delayed detection and prolonged decrease in viral load relative to controls, indicating that preexisting, neutralizing antibodies (passively administered or actively elicited) affect the course of acute-phase virus replication and can be influential after the Ab can no longer be detected in the peripheral circulation [Conley et al.(1996)]
- 2F5: A panel of immunotoxins were generated by linking Env MAbs to ricin A – immunotoxins mediated cell killing, but killing was not directly proportional to binding [Pincus et al.(1996)]
- 2F5: Called IAM 2F5 – antibody mediated enhancement or inhibition seemed to be determined by isolate rather than antibody specificity – in this study, only 2F5 inhibited the entry of all the viruses studied, irrespective of their phenotype, and directly proportional to its affinity to monomeric HIV-1 gp160 [Schutten et al.(1997)]
- 2F5: Of three neutralizing MAbs (257-D, IgG1b12, and 2F5), 2F5 was the only one to inhibit the entry of all viruses studied, both SI and NSI, with a potency proportional to its affinity for monomeric gp126 [Schutten et al.(1997)]

697 cont.

- 2F5: In a multilab evaluation of monoclonal antibodies, only IgG1b12, 2G12, and 2F5 could neutralize at least half of the 9 primary test isolates at a concentration of < 25 μg per ml for 90% viral inhibition – the isolates with no 2F5 neutralizing susceptibility had the sequences ALGQWA or ELDTWA instead of EDLKWA – 7/9 primary isolates were neutralized, and ALDKWQ and ALDKWA were susceptible to neutralization [D'Souza et al.(1997)]
- 2F5: A JRCSF variant that was selected for IgG1b12 resistance remained sensitive to MAbs 2G12 and 2F5, for combination therapy [Mo et al.(1997)]
- 2F5: One of 14 human MAbs tested for ability to neutralize a chimeric SHIV-vpu+, which expressed HIV-1 IIIB env – strong neutralizer of SHIV-vpu+ – all Ab combinations tested showed synergistic neutralization – 2F5 has synergistic response with MAbs 694/98-D (anti-V3), 2G12, b12, and F105 [Li et al.(1997)]
- 2F5: IgG1b12 was more potent with greater breadth than MAb 2F5 in an infection reduction assay including 35 primary isolates [Kessler II et al.(1997)]
- 2F5: Review: MABs 2F5, 2G12 and IgG1b12 have potential for use in combination with CD4-IgG2 as an immunotherapeutic or immunoprophylactic – homologous MAbs to these are rare in humans and vaccine strategies should consider including constructs that may enhance exposure of these MAbs' epitopes [Moore & Trkola(1997)]
- 2F5: Binding of anti-gp120 MAbs IgG1b12 or 654-30D does not mediate significant exposure of the gp41 epitopes for MAbs 2F5 and 50-69 [Stamatatos et al.(1997)]
- 2F5: Using concentrations of Abs achievable *in vivo*, the triple combination of 2F5, 2G12 and HIVIG was found to be synergistic to have the greatest breadth and magnitude of response against 15 clade B primary isolates [Mascola et al.(1997)]
- 2F5: Used to standardize polyclonal response to CD4 BS [Turbica et al.(1997)]
- 2F5: The only MAb out of a large panel to show no correlation between Viral binding inhibition and neutralization [Ugolini et al.(1997)]
- 2F5: This review summarizes results about 2F5: it binds extracellularly, near the transmembrane domain, it is the only gp41 MAb that is neutralizing, it reacts with many non-B clade viruses and has a paradoxically weak binding to virus, given the neutralizing titres [Burton & Montefiori(1997)]
- 2F5: Post-exposure prophylaxis was effective when MAb 694/98-D was delivered 15 min post-exposure to HIV-1 LAI in hu-PBL-SCID mice, but declined to 50% if delivered 60 min post-exposure, and similar time constraints have been observed for HIVIG, 2F5 and 2G12, in contrast to MAb BAT123 that could protect delivered 4 hours post infection [Andrus et al.(1998)]
- 2F5: This MAb and the results of [Ugolini et al.(1997)] are discussed – the authors propose that an Ab bound to gp41 would typically project less from the surface of the virion and so be unable to interfere with attachment [Parren et al.(1998)]
- 2F5: Ab from gp120 vaccinated individuals prior to infection, who subsequently became HIV infected, could not achieve 90% neutralization of the primary virus by which the individuals were ultimately infected – these viruses were not particularly refractive to neutralization, as determined by their susceptibility to neutralization by MAbs 2G12, IgG1b12, 2F5 and 447-52D [Connor et al.(1998)]

697 cont.

- 2F5: A neutralization assay was developed based on heminested PCR amplification of the LTR (HNPCR) – LTR-HNPCR consistently revealed HIV DNA and was shown to be a rapid, specific and reliable neutralization assay based on tests with 6 MAbs and 5 isolates [Yang et al.(1998)]
- 2F5: A wide range of neutralizing titers was observed that was independent of co-receptor usage – 2F5 was the most potent of the MAbs tested [Trkola et al.(1998)]
- 2F5: Points out that 2G12 and 2F5, potent neutralizing antibodies, were identified by screening for cell surface (oligomeric envelope) reactivity [Fouts et al.(1998)]
- 2F5: The ELDKWA epitope was inserted into the antigenic site B of influenza hemagglutinin and expressed on baculovirus infected insect cells, flanked by 3 additional random amino acids, xELDKWAxx – FACS was used to isolate the clone that displayed the epitope with the most markedly increased binding capacity for 2F5, to identify particularly specific immunogenic constructs – PELDKWAPP was a high affinity form selected by FACS [Ernst et al.(1998)]
- 2F5: Induces complement-mediated lysis in MN but not primary isolates – primary isolates are refractive to CML [Takefman et al.(1998)]
- 2F5: Neutralization synergy was observed when the MAbs 694/98-D (V3), 2F5 (gp41), and 2G12 (gp120 discontinuous) were used in combination, and even greater neutralizing potential was seen with the addition of a fourth MAb, F105 (CD4 BS) [Li et al.(1998)]
- 2F5: UK Medical Research Council AIDS reagent: ARP3063
- 2F5: NIH AIDS Research and Reference Reagent Program: 1475

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
698	polyclonal	gp41(662-667 BH10)	gp41(152-157)	ELDKWA	L	chimeric influenza virus/ELDKWA	murine(IgG,IgA)
		Donor: Hermann Katinger, U. of Bodenkultur, or Polymun Scientific Inc., Vienna, Austria; Viral Testing Systems, Houston, TX, USA **References:** [Muster et al.(1994), Muster et al.(1995)] **NOTES:** • Sustained ELDKWA specific IgA response in mucosa of immunized mice [Muster et al.(1995)]					
699	B30	gp41(720-734 BH10)	gp41(210-224)	HLPIPRGPDRPEGIE		mis-folded LAI rgp160	murine(IgG_1)
		Donor: Gearoge Lewis **References:** [Abacioglu et al.(1994)] **NOTES:** • B30: Epitope boundaries mapped by peptide scanning [Abacioglu et al.(1994)]					
700	B31	gp41(727-734 BH10)	gp41(217-224)	PDRPEGIE		mis-folded LAI rgp160	murine(IgG_1)
		Donor: Gearoge Lewis **References:** [Abacioglu et al.(1994)] **NOTES:** • B31: Epitope boundaries mapped by peptide scanning [Abacioglu et al.(1994)]					
701	B33	gp41(727-734 BH10)	gp41(217-224)	PDRPEGIE	N	Baculovirus-expressed mis-folded rgp160 IIIB:NL43, MicroGenSys	murine(IgG_1)
		Donor: Gearoge Lewis **References:** [Abacioglu et al.(1994), Bristow et al.(1994)] **NOTES:** • B33: There are two MAbs in the literature named B33. See also gp120, LAI 123-142 [Bristow et al.(1994)] • B33: Epitope boundaries mapped by peptide scanning IgG1 [Abacioglu et al.(1994)]					

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
702	C8	gp41(727-732 BH10)	gp41(217-222)	PDRPEG	N	mis-folded LAI rgp160	murine(IgG_1)

Donor: Gearoge Lewis
References: [Pincus & McClure(1993), Pincus et al.(1993), Abacioglu et al.(1994)]
NOTES:
- C8: Immunotoxin of C8 coupled to ricin-A does not mediate cells killing, and is not affected by sCD4 [Pincus & McClure(1993)]
- C8: Ab response in IIIB lab workers was compared to gp160 LAI vaccine recipients – C8 was used as a control – the dominant response among vaccinees was to this mid-gp41 region, but not among the infected lab workers – Abs binding this region do not neutralize, bind to infected cells, nor serve as immunotoxins [Pincus et al.(1993)]
- C8: Epitope boundaries mapped by peptide scanning [Abacioglu et al.(1994)]

703	88-158/02	gp41(732-752 IIIB)	gp41(222-237)	GIEEEGGERDRDRSIR		rgp41 IIIB	murine(IgG_{2b})

Donor: Gearoge Lewis
References: [Niedrig et al.(1992a)]
NOTES:
- 88-158/02: Mild inhibition of *in vitro* activity at high MAb concentrations – profound enhancing activity at low concentrations – significant reactivity to virion – domain non-immunogenic in humans [Niedrig et al.(1992a)]

704	88-158/022	gp41(732-752 IIIB)	gp41(222-237)	GIEEEGGERDRDRSIR		rgp41 IIIB	murine(IgG_{2b})

Donor: Gearoge Lewis
References: [Niedrig et al.(1992a)]
NOTES:
- 88-158/022: Mild inhibition of *in vitro* activity at high MAb concentrations – profound enhancing activity at low concentrations – significant reactivity to virion – domain non-immunogenic in humans [Niedrig et al.(1992a)]

705	88-158/079	gp41(732-752 IIIB)	gp41(222-237)	GIEEEGGERDRDRSIR		rgp41 IIIB	murine(IgG_1)

Donor: Gearoge Lewis
References: [Niedrig et al.(1992a)]
NOTES:
- 88-158/079: Mild inhibition of HIV *in vitro* at high MAb concentrations – profound enhancing activity at low concentrations – weak binding to virion – domain non-immunogenic in humans [Niedrig et al.(1992a)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
706	B8	gp41(733-741 BH10)	gp41(223-231)	IEEEGGERD	N	mis-folded LAI rgp160	murine(IgG_1)

Donor: Gearoge Lewis
References: [Pincus et al.(1993), Abacioglu et al.(1994)]
NOTES:
- B8: Ab response in IIIB lab workers was compared to gp160 LAI vaccine recipients – B8 was used as a control – the dominant response among vaccinees was to this mid-gp41 region, but not among the infected lab workers – Abs binding this region do not neutralize, bind to infected cells, nor serve as immunotoxins [Pincus et al.(1993)]
- B8: Epitope boundaries mapped by peptide scanning [Abacioglu et al.(1994)]

707	LA9 (121-134)	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	?	murine(IgM)

Donor: Gearoge Lewis
References: [Evans et al.(1989)]

708	ED6	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	?	murine(IgM)

Donor: Gearoge Lewis
References: [Evans et al.(1989)]

709	1575	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Gearoge Lewis
References: [Evans et al.(1989), Vella et al.(1993), Buratti et al.(1997)]
NOTES:
- 1575: Neutralizing activity, less broad than 1577 [Evans et al.(1989)]
- 1575: Core epitope: IEEE – neutralized IIIB, but not RF or MN [Vella et al.(1993)]
- 1575: Study shows that MAb 1575 can recognize the IEEE sequence in both gp41, and in the HPG30 region of the p17 protein – motif is conserved in both regions in different HIV-1 clades [Buratti et al.(1997)]

710	1576	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Gearoge Lewis
References: [Vella et al.(1993)]
NOTES:
- 1576: Not neutralizing [Vella et al.(1993)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
711	1577	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Evans et al.(1989), D'Souza et al.(1991), Vella et al.(1993)]
NOTES:
- 1577: Raised against IIIB peptide chimera – neutralized African and American HIV-1 lab strains [Evans et al.(1989)]
- 1577: Non-neutralizing in this multi-lab study [D'Souza et al.(1991)]
- 1577: Core epitope: ERDRD – could neutralize HIV IIIB and HIV RF [Vella et al.(1993)]
- 1577: UK Medical Research Council AIDS reagent: ARP317
- 1577: NIH AIDS Research and Reference Reagent Program: 1172

712	1578	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Evans et al.(1989), Vella et al.(1993)]
NOTES:
- 1578: No neutralizing activity – epitope may be formed by regions from both poliovirus and HIV [Evans et al.(1989)]
- 1578: Core epitope: IEEE – in this study, neutralized IIIB, but not RF or MN [Vella et al.(1993)]

713	1899	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Vella et al.(1993)]
NOTES:
- 1899: Could neutralize HIV IIIB and HIV RF [Vella et al.(1993)]

714	1579	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Vella et al.(1993)]
NOTES:
- 1579: Core epitope: IEEE – neutralized IIIB, but not RF or MN [Vella et al.(1993)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
715	1583	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Evans et al.(1989), Vella et al.(1993), Sattentau et al.(1995)]
NOTES:
- 1583: Neutralizing activity, less broad than 1577 [Evans et al.(1989)]
- 1583: Core epitope: ERDRD – Could neutralize HIV IIIB but not HIV RF [Vella et al.(1993)]
- 1583: Cytoplasmic domain, epitope not exposed at the surface of HIV-1 infected cells [Sattentau et al.(1995)]

716	1907	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Vella et al.(1993)]
NOTES:
- 1907: Could not neutralize HIV IIIB, RF or MN [Vella et al.(1993)]

717	1908	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Evans et al.(1989), Vella et al.(1993), Sattentau et al.(1995)]
NOTES:
- 1908: Neutralized IIIB, but not RF or MN [Vella et al.(1993)]
- 1908: Cytoplasmic domain, epitope not exposed at the surface of HIV-1 infected cells [Sattentau et al.(1995)]

718	1909	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Poliovirus/gp41 peptide chimera	murine

Donor: Morag Ferguson (NIBSC)
References: [Vella et al.(1993)]
NOTES:
- 1909: Neutralized HIV IIIB but not HIV RF [Vella et al.(1993)]

719	41-1	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Peptide 735-752 IIIB	murine(IgM_{κ})

Donor: Morag Ferguson (NIBSC)
References: [Dalgleish et al.(1988)]
NOTES:
- 41-1: This antibody gp41(735-752 IIIB) [Dalgleish et al.(1988)] seems to have been named the same as a different MAb to gp41(584-609) [Mani et al.(1994)]
- 41-1: Neutralizes HIV-1 but not HIV-2 strains [Dalgleish et al.(1988)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
720	41-2	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Peptide 735-752 IIIB	murine(IgM_{κ})

Donor: Morag Ferguson (NIBSC)
References: [Dalgleish et al.(1988)]
NOTES:
- 41-2: Neutralizes HIV-1 but not HIV-2 strains [Dalgleish et al.(1988)]

721	41-3	gp41(735-752 IIIB)	gp41(218-235)	DRPEGIEEEGGERDRDRS	N	Peptide 735-752 IIIB	murine(IgM_{κ})

Donor: Morag Ferguson (NIBSC)
References: [Dalgleish et al.(1988)]
NOTES:
- 41-3: Neutralizes HIV-1 but not HIV-2 strains [Dalgleish et al.(1988)]

722	4E10	gp41(824-830 BH10)	gp41(313-319)	AEGTDRV	N	HIV-1 infection	human($IgG_{3\kappa}$)

Donor: Morag Ferguson (NIBSC)
References: [Buchacher et al.(1992), Buchacher et al.(1994), D'Souza et al.(1994)]
NOTES:
- 4E10: MAbs generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells – also binds to MHC class II proteins – anti-class II Abs are only found in HIV-1 positive people [Buchacher et al.(1994)]
- 4E10: Included in a multi-lab study for antibody characterization, binding and neutralization assay comparison [D'Souza et al.(1994)]

723	DZ	gp41(827-860 BRU)	gp41(312-345)	VAEGTDRVIEVVQGACR-AIRHIPRRIRQGLERIL?	L	rec vaccinia gp160 IIIB	human($IgG_{1\lambda}$)

Donor: ?
References: [Boyer et al.(1991)]
NOTES:
- DZ: Weakly neutralizing IIIB – binds to peptides 827-843 and 846-860 of BRU – reacted specifically with IIIB and RF [Boyer et al.(1991)]

724	Chessie 8	gp41(cytoplasmic domain)	gp41	VAEGTDRVIEVVQGACR-AIRHIPRRIRQGLERIL?			murine(IgG)

Donor: G. Lewis
References: [Lewis et al.(1991), Poumbourios et al.(1995), Rovinski et al.(1995)]
NOTES:
- Chessie 8: Used to precipitate gp160 in immunoblots in a study examining the feasibility of using unprocessed gp160 glycoprotein as an immunogen [Rovinski et al.(1995)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
725	K14	gp41(dis)	gp41(dis)	DISCONTINUOUS	N		human(IgG_1)

Donor: ?

References: [Teeuwsen et al.(1990), Schutten et al.(1995a), Schutten et al.(1995b), Schutten et al.(1996), Schutten et al.(1997)]

NOTES:

- K14: Did not bind to peptides spanning gp41, but it does not react with env deletion mutant 643-692 – does not react with HIV-2 – competition experiments showed this was an immunodominant conserved epitope in HIV-1 positive sera from Europe and Africa [Teeuwsen et al.(1990)]
- K14: Reduced affinity for both SI and NSI viruses relative to MAb MN215, failed to neutralize SI strain [Schutten et al.(1995b)]
- K14: In a study of NSI and SI virus neutralization, K14 did not influence viral entry [Schutten et al.(1997)]

726	T30	gp41(dis)	gp41(dis)	DISCONTINUOUS	N	tetrameric Env	murine

Donor: ?

References: [Earl et al.(1994), Earl et al.(1997)]

NOTES:

- T30: binds to the region 580 to 640, but does not bind to peptides spanning this region – binding depends on N-linked glycosylation of Asn 616 – no other antibody tested inhibited binding, but binding could be inhibited by sera from HIV+ individuals [Earl et al.(1997)]

727	126-50	gp41(dis HXB2)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{2\kappa}$)

Donor: ?

References: [Robinson Jr. et al.(1990a), Tyler et al.(1990), Robinson Jr. et al.(1991), Xu et al.(1991)]

NOTES:

- 126-50: No enhancing activity for HIV-1 IIIB [Robinson Jr. et al.(1990a)]
- 126-50: Serves as target for antibody-dependent cellular cytotoxicity ADCC [Tyler et al.(1990)]
- 126-50: No enhancing or neutralizing activity [Robinson Jr. et al.(1991)]
- 126-50: Specific for a conformational epitope [Xu et al.(1991)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
728	T4	gp41(dis IIIB)	gp41(dis)	DISCONTINUOUS	L	vaccinia expressed oligomeric gp140 IIIB	murine(IgG)

Donor: ?
References: [Earl et al.(1994), Broder et al.(1994), Richardson Jr et al.(1996), Weissenhorn et al.(1996), Earl et al.(1997), Otteken et al.(1996)]
NOTES:

- T4: one of five MAbs (T4, T6, T9, T10 and T35) in a competition group that bind to a conformation-dependent epitope in gp41 and is oligomer specific – neutralizes IIIB and SF2 [Broder et al.(1994)]
- T4: Does not bind to soluble monomeric gp41(21-166) that lacks the fusion peptide and membrane anchor, only to the oligomer gp140, as does T6 [Weissenhorn et al.(1996)]
- T4: This antibody, along with 7 others (M10, D41, D54, T6, T9, T10 and T35), can block the linear murine MAb D61, and the human MAb 246-D, which both bind to the immunodominant region near the two Cys in gp41 – most of these antibodies are oligomer dependent – all of the MAbs are reactive with ten different HIV-1 strains – members of this competition group are blocked by sera from HIV-1+ individuals [Earl et al.(1997)]
- MAbs T4 and T6 bind only to oligomer, and pulse chase experiments indicate that the epitope is very slow to form, requiring one to two hours [Otteken et al.(1996)]

729	D12	gp41(dis IIIB)	gp41(dis)	DISCONTINUOUS	L	vaccinia expressed oligomeric gp140 IIIB	murine(IgG)

Donor: ?
References: [Broder et al.(1994), Richardson Jr et al.(1996), Earl et al.(1997), Otteken et al.(1996)]
NOTES:

- D12: One of 18 MAbs (*e. g.* D4 and D40) that bind to a conformation-dependent epitope in gp41 that bind preferentially, but not exclusively, to oligomers – neutralizes IIIB and SF2 [Broder et al.(1994)]
- D12: This antibody was blocked more strongly by human sera than other anti-gp41 MAbs (D20, D43, D61, and T4) in a oligomeric ELISA assay [Richardson Jr et al.(1996)]
- D12: MAbs D10 and D12 are very easily blocked by human sera from HIV+ individuals [Earl et al.(1997)]
- D12: MAbs D4, D10, D11, D12, and D41 all bind only to complete oligomer – pulse label experiments of MAb binding to noncleavable gp160 revealed that these MAbs bound with a delay, epitopes forming with a half life of 30 min [Otteken et al.(1996)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
730	D1	gp41(dis IIIB)	gp41(dis)	DISCONTINUOUS		vaccinia expressed oligomeric gp140 IIIB	murine(IgG)

Donor: ?
References: [Otteken et al.(1996)]
NOTES:
- D1: MAbs D1, D16, had T37 bind to oligomeric gp160 equally well – pulse label experiments of MAb binding to noncleavable gp160 revealed that these MAbs bound with a delay, epitopes forming with a half life of 30 min [Otteken et al.(1996)]

731	D16	gp41(dis IIIB)	gp41(dis)	DISCONTINUOUS	L	dimeric Env	murine(IgG)

Donor: ?
References: [Earl et al.(1994), Weissenhorn et al.(1996), Earl et al.(1997)]
NOTES:
- D16: Precipitates both oligomeric gp140 and soluble monomeric gp41(21-166)that lacks the fusion peptide and membrane anchor, along with MAbs D16, D38, D40, D41, and D54 [Weissenhorn et al.(1996)]
- D16: One of eleven MAbs (D16, D17, D31, D36, D37, D40, D44, D55, D59, T37, and T45) that are conformation dependent and that can block the binding of the MAb D50 that binds to the linear peptide gp41(642-665) – reactive with 9/10 HIV-1 strains all except HIV-1 ADA, which has the change E659D and E662A that may result in the loss of binding (ELLE to DLLA) [Earl et al.(1997)]

732	126-6	gp41(dis HXB2)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{2\kappa}$)

Donor: Susan Zolla-Pazner, NYU Med Center, NY, NY
References: [Robinson Jr. et al.(1990a), Robinson Jr. et al.(1991), Xu et al.(1991), Eddleston et al.(1993), Chen et al.(1995), Binley et al.(1996), Earl et al.(1997)]
NOTES:
- 126-6: No enhancing activity for HIV-1 IIIB [Robinson Jr. et al.(1990a)]
- 126-6: No enhancing or neutralizing activity [Robinson Jr. et al.(1991)]
- 126-6: Specific for a conformational epitope [Xu et al.(1991)]
- 126-6: Called SZ-126.6 [Eddleston et al.(1993)]
- 126-6: One of several anti-gp41 MAbs that bind to a gp41-maltose binding fusion protein designed to study the leucine zipper domain of gp41, showing that the construct has retained aspects of normal gp41 conformation [Chen et al.(1995)]
- 126-6: Discontinuous epitope recognizing residues between 649-668 – designated cluster II – Fabs D5, D11, G1, T3, M12, M15, S6, S8, S9, S10 block binding [Binley et al.(1996)]
- 126-6: NIH AIDS Research and Reference Reagent Program: 1243

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
733	D43	gp41(dis HXB2)	gp41(dis)	DISCONTINUOUS		dimeric Env	murine(IgG)

Donor: Susan Zolla-Pazner, NYU Med Center, NY, NY
References: [Earl et al.(1994), Richardson Jr et al.(1996), Earl et al.(1997)]
NOTES:
- D43: This is a linear gp41 epitope, mapping in the region 635-678 – human sera blocked binding in oligomeric ELISA assay to a similar extent for gp41 MAbs D20, D43, D61, and T4 [Richardson Jr et al.(1996)]
- D43: Partially conformation dependent – doesn't bind to short peptides, but does bind to the region spanning 641-683 – binding can be blocked by MAbs T3, D38 and D45 – MAbs in this competition group reacted with 9/10 HIV-1 strains, not binding to JRFL [Earl et al.(1997)]

734	T3	gp41(dis HXB2)	gp41(dis)	DISCONTINUOUS		tetrameric Env	murine(IgG)

Donor: Susan Zolla-Pazner, NYU Med Center, NY, NY
References: [Earl et al.(1994), Earl et al.(1997)]
NOTES:
- T3: Partially conformation dependent – doesn't bind to short peptides, but does bind to the region spanning 641-683 – binding can be blocked by MAbs D43, D38 and D45 – MAbs in this competition group reacted with 9/10 HIV-1 strains, not binding to JRFL [Earl et al.(1997)]

735	Md-1	gp41(dis)	gp41(dis)	DISCONTINUOUS	N	?	human($IgG_{1\lambda}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Myers et al.(1993), Chen et al.(1995), Binley et al.(1996)]
NOTES:
- Md-1: Also called MD-1
- Md-1: Called MD-1 – discontinuous epitope that binds in the N-terminal region – reacts exclusively with oligomer [Myers et al.(1993)]
- Md-1: Called MD-1 – one of several anti-gp41 MAbs that bind to a gp41-maltose binding fusion protein designed to study the leucine zipper domain of gp41, showing that the construct has retained aspects of normal gp41 conformation [Chen et al.(1995)]
- Md-1: Discontinuous epitope recognizing residues between 563-672, does not recognize cluster I disulfide bridge region – reacts almost exclusively with trimers and tetramers on WB – designated cluster II – Fabs D5, D11, G1, T3, M12, M15, S6, S8, S9, S10 block binding [Binley et al.(1996)]
- Md-1: NIH AIDS Research and Reference Reagent Program: 1223

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
736	Fab D5	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab D5: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

737	Fab D11	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab D11: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

738	Fab G1	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab G1: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

739	Fab T3	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab T3: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

740	Fab M10	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996), Parren et al.(1997b)]
NOTES:
- Fab M10: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]
- Fab M10: Does not bind to MN native oligomer, but does bind to both LAI and MN rgp120 and rgp140 [Parren et al.(1997b)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
741	Fab M12	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab M12: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

742	Fab M15	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab M15: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

743	Fab S6	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab S6: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

744	Fab S8	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab S8: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

745	Fab S9	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab S9: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
746	Fab S10	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: R. A. Myers State of Maryland Dept. of Health
References: [Binley et al.(1996)]
NOTES:
- Fab S10: Binds to Cluster II region – competes with MAbs 126-6, Md-1 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

747	Fab L2	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California
References: [Binley et al.(1996), Earl et al.(1997)]
NOTES:
- Fab L2: Binds to Cluster III region – competes with MAb Md-1, but not MAbs 126-6 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

748	Fab L11	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California
References: [Binley et al.(1996)]
NOTES:
- Fab L11: Binds to Cluster III region – competes with MAb Md-1, but not MAbs 126-6 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

749	Fab L1	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California
References: [Binley et al.(1996)]
NOTES:
- Fab L1: Binds to Cluster III region – competes with MAb Md-1, but not MAbs 126-6 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

750	Fab G5	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California
References: [Binley et al.(1996)]
NOTES:
- Fab G5: Binds to Cluster III region – competes with MAb Md-1, but not MAbs 126-6 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
751	Fab G15	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California **References:** [Binley et al.(1996)] **NOTES:** • Fab G15: Binds to Cluster III region – competes with MAb Md-1, but not MAbs 126-6 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]						
752	Fab A9	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California **References:** [Binley et al.(1996)] **NOTES:** • Fab A9: Binds to Cluster III region – competes with MAb Md-1, but not MAbs 126-6 and D50 – conformation sensitive – variable regions sequenced [Binley et al.(1996)]						
753	Fab A12	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California **References:** [Binley et al.(1996)] **NOTES:** • Fab A12: Uncharacterized epitope – variable regions sequenced [Binley et al.(1996)]						
754	Fab L9	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\kappa}$)
	Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California **References:** [Binley et al.(1996)] **NOTES:** • Fab L9: Uncharacterized epitope – variable regions sequenced [Binley et al.(1996)]						
755	Fab A2	gp41(dis LAI)	gp41(dis)	DISCONTINUOUS	N	HIV-1 infection	human($IgG_{1\lambda}$)
	Donor: P. Perrin and D. Burton (Scripps Research Institute, La Jolla, California **References:** [Binley et al.(1996)] **NOTES:** • Fab A2: Uncharacterized epitope – variable regions sequenced [Binley et al.(1996)]						
756	H2	gp41(dis)	gp41(dis)	DISCONTINUOUS		?	human(IgM_{κ})
	Donor: BioInvent, Lund, Sweden, commercial **References:** [Muller et al.(1991)] **NOTES:** • H2: Anti-idiotypic MAbs (10B3 and 2All) against H2 were generated by immunization of BALB/c mice with H2 – they also react with seropositive sera [Muller et al.(1991)]						

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
757	MO43	gp41(dis)	gp41(dis)	DISCONTINUOUS	N	*in vitro* r Env penv9	human(IgM)

Donor: ?
References: [Ohlin et al.(1989)]
NOTES:
- MO43: Discontinuous epitope involving hydrophobic regions 632-646, 677-681 and 687-691, proximal to and spanning the transmembrane region – this specificity is unusual in HIV-1 positive sera [Ohlin et al.(1989)]

758	MO30	gp41(dis)	gp41(dis)	DISCONTINUOUS	N	*in vitro* r Env penv9	human(IgM)

Donor: ?
References: [Ohlin et al.(1989)]
NOTES:
- MO30: Discontinuous epitope involving hydrophobic regions 632-646, 677-681 and 687-691, proximal to and spanning the transmembrane region – this specificity is unusual in HIV-1 positive sera [Ohlin et al.(1989)]

759	MO28	gp41(dis)	gp41(dis)	DISCONTINUOUS	N	*in vitro* r Env penv9	human(IgM)

Donor: ?
References: [Ohlin et al.(1989)]
NOTES:
- MO28: Discontinuous epitope involving hydrophobic regions 632-646, 677-681 and 687-691, proximal to and spanning the transmembrane region – this specificity is unusual in HIV-1 positive sera [Ohlin et al.(1989)]

760	2A2	gp41(N-term)	gp41(dis)	?	N	HIV-1 infection	human($IgG_{1\kappa}$)

Donor: ?
References: [Weissenhorn et al.(1996)]
NOTES:
- Soluble gp41(21-166) forms a rod like structure that can be visualized with electron microscopy, and 2A2 binds to one end of the rod [Weissenhorn et al.(1996)]

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
761	N2-4	gp41	gp41	?	N	HIV-1 infection	human($IgG_{1\kappa}$)
		Donor: Evan Hersh and Yoh-Ichi Matsumoto **References:** [Robinson Jr. et al.(1990a)] **NOTES:** • N2-4: No enhancing activity for HIV-1 IIIB [Robinson Jr. et al.(1990a)] • N2-4: NIH AIDS Research and Reference Reagent Program: 528					
762	M25	gp41	gp41	?		purified HTLV-III	murine(IgG_{κ})
		Donor: Evan Hersh and Yoh-Ichi Matsumoto **References:** [di Marzo Veronese et al.(1985), Watkins et al.(1996)] **NOTES:** • M25: heavy and light chains cloned and sequenced – binding requires heavy and light chain in combination, in contrast to M77 [Watkins et al.(1996)]					
763	10E9	gp41	gp41	?		HIV-1 infection	murine(IgG_1)
		Donor: Evan Hersh and Yoh-Ichi Matsumoto **References:** [Papsidero et al.(1988)] **NOTES:** • 10E9: 100/100 HIV+ human sera could inhibit 10E9 binding [Papsidero et al.(1988)]					
764	31A1	gp41	gp41	?	N	*in vitro* immunization, denatured HIV-1	human($IgM_{\kappa/\lambda}$)
		Donor: ? **References:** [Pollock et al.(1989)] **NOTES:** • 31A1: Reacts with both p24 and gp41 [Pollock et al.(1989)]					
765	39A64	gp41	gp41	?	N	*in vitro* immunization, denatured HIV-1	human($IgM_{\kappa/\lambda}$)
		Donor: ? **References:** [Pollock et al.(1989)] **NOTES:** • 39A64: Reacts with both p24 and gp41 [Pollock et al.(1989)]					

	MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
766	39B86	gp41	gp41	?	N	*in vitro* immunization, denatured HIV-1	human($IgM_{\kappa/\lambda}$)
		Donor: ? **References:** [Pollock et al.(1989)] **NOTES:** • 39B86: Reacts with both p24 and gp41 [Pollock et al.(1989)]					
767	9303	gp41 **Donor:** Du Pont **References:** [McDougal et al.(1996)]	gp41		N		murine
768	3H6	gp41 **Donor:** Du Pont **References:** [Pinter et al.(1995)] **NOTES:** • 3H6: There is another MAb with this ID that recognizes Rev [Orsini et al.(1995)] • 3H6: Generated in response to virus grown in protein-free medium [Pinter et al.(1995)]	gp41				murine
769	31710B	gp41 **Donor:** Du Pont **References:** [Alsmadi & Tilley(1998)] **NOTES:** • 31710B: A study of 6 anti-Env MAbs and their ability to bind or direct ADCC against target cells infected with IIIB, MN, SF-2, and RF – bound and directed lysis against all four strains [Alsmadi & Tilley(1998)]	gp41				human(IgG1)