

Table 11: **Nef**

<b>Mab ID</b>	<b>Location</b>	<b>WEAU</b>	<b>Sequence</b>	<b>Neutralizing</b>	<b>Immunogen</b>	<b>Species(Isotype)</b>
770 4H4	Nef(1-33 IIB)	Nef(1-33)	MGGKWSKSSVVGWPTV- RERMRRAPTVERMRR- AEPAADGVGAA		Nef fusion protein	human(IgG <sub>1</sub> )
	<b>Donor:</b> Du Pont					
	<b>References:</b> [Otake et al.(1994)]					
	<b>NOTES:</b>					
	• 4H4: This Mab could not detect Nef protein on the cell surface – C-term anti-Nef Abs could [Otake et al.(1994)]					
771 13/042	Nef(11-24 BH10)	Nef(11-20)	VGWPTVERRM		rec Nef fragment	murine
	<b>Donor:</b> Du Pont					
	<b>References:</b> [Schneider et al.(1991)]					
	<b>NOTES:</b>					
	• 13/042: Epitope mapped by overlapping decapeptides – core: TVRERM [Schneider et al.(1991)]					
772 13/035	Nef(11-24 BH10)	Nef(15-24)	TVRERMRAE		rec Nef fragment	murine
	<b>Donor:</b> Du Pont					
	<b>References:</b> [Schneider et al.(1991)]					
	<b>NOTES:</b>					
	• 13/035: Epitope mapped by overlapping decapeptides – core: TVRERM [Schneider et al.(1991)]					
773 NF2B2	Nef(20-78 BH10)	Nef	?		recombinant BH10 Nef	murine
	<b>Donor:</b> Du Pont					
	<b>References:</b> [Kaminchik et al.(1990)]					
	<b>NOTES:</b>					
	• NF2B2: Recognizes the Nef protein of the two isolates BH10 and LAV1 [Kaminchik et al.(1990)]					
	• NF2B2: NIH AIDS Research and Reference Reagent Program: 456					
774 NF3A3	Nef(20-78 BH10)	Nef	?		rec BH10 Nef	murine
	<b>Donor:</b> Du Pont					
	<b>References:</b> [Kaminchik et al.(1990)]					
	<b>NOTES:</b>					
	• NF3A3: Recognizes the Nef protein of the two isolates BH10 and LAV1 – low affinity [Kaminchik et al.(1990)]					

## HIV Monoclonal Antibodies

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
775 AM5C6	Nef(28-43 + 78-92 BH10)	Nef	DGVGAASRDLEKHGAI + KAAVDLSHFLK		rec Nef fragment	murine
	<b>Donor:</b> Du Pont <b>References:</b> [Schneider et al.(1991)] <b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>AM5C6: Epitope mapped by overlapping decapeptides – core: SRDL – also reacts with Nef(78-92) [Schneider et al.(1991)]</li> </ul>					
776 26/76	Nef(30-43 BH10)	Nef(30-43)	VGAASRDLEKHGAI		rec Nef fragment	murine
	<b>Donor:</b> Du Pont <b>References:</b> [Schneider et al.(1991)] <b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>26/76: Epitope mapped by overlapping decapeptides – core: SRDLEK [Schneider et al.(1991)]</li> </ul>					
777 25/03	Nef(30-43 BH10)	Nef(30-43)	VGAASRDLEKHGAI		rec Nef fragment	murine
	<b>Donor:</b> Du Pont <b>References:</b> [Schneider et al.(1991)] <b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>25/03: Epitope mapped by overlapping decapeptides – core: ASRDLEK [Schneider et al.(1991)]</li> </ul>					
778 3F2	Nef(31-40 BRU-LAI)	Nef(31-40)	GAASRDLEKH?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
	<b>Donor:</b> Du Pont <b>References:</b> [Ovod et al.(1992), Saito et al.(1994), Ranki et al.(1995)] <b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>3F2: Reacted with Nef from different HIV-1 strains (BRU, IIB, RF, MN) [Ovod et al.(1992)]</li> <li>3F2: Faintly cross-reactive with astrocytes of uninfected control samples [Ranki et al.(1995)]</li> <li>3F2: UK Medical Research Council AIDS reagent: EVA3067.1</li> </ul>					

HIV Monoclonal Antibodies

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
779 3D12	Nef(31-50 BRU-LAI)	Nef(31-50)	GAASRDLEKHGATSSN-TAA?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
	<b>Donor:</b> Du Pont <b>References:</b> [Ovod et al.(1992), Saito et al.(1994), Ranki et al.(1995)]					
	<b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>• 3D12: There is an anti-RT MAb that also has this name (see [Chiba et al.(1997)])</li> <li>• 3D12: Reacted with Nef from different HIV-1 strains (BRU, IIB, RF, MN) [Ovod et al.(1992)]</li> <li>• 3D12: Over-expression of Nef in astrocytes from postmortem pediatric CNS tissues [Saito et al.(1994)]</li> <li>• 3D12: One of four antibodies used in combination to show HIV Nef protein expressed in astrocytes from 7/14 brain samples from HIV+ individuals – Nef expression associated with dementia [Ranki et al.(1995)]</li> <li>• 3D12: UK Medical Research Council AIDS reagent: EVA3067.2</li> </ul>					
780 3G12	Nef(51-71 BRU-LAI)	Nef(49-69)	TNAACAWLEAQEEEEVG-FPVT?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>2a</sub> )
	<b>Donor:</b> Du Pont <b>References:</b> [Ovod et al.(1992)]					
	<b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>• 3G12: Reacted with Nef from different HIV-1 strains (BRU, IIB, RF, MN) [Ovod et al.(1992)]</li> </ul>					
781 2E3	Nef(61-80 BRU-LAI)	Nef(59-78)	QEEEEVGFPVTPQVPLR- PMT?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
	<b>Donor:</b> Du Pont <b>References:</b> [Ovod et al.(1992), Nilsen et al.(1996)]					
	<b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>• 2E3: There are two MAbs with the name 2E3 – the other one binds to integrase [Nilsen et al.(1996)]</li> <li>• 2E3: Two isomorphous forms of Nef were identified, 2E3 reacted with the p24 but not p27 form, and was strain specific (MN and BRU reactive, not IIB or RF) [Ovod et al.(1992)]</li> </ul>					
782 26/028	Nef(60-73 BH10)	Nef(58-71)	AQEEEEVGFPVTPQ		rec Nef fragment	murine
	<b>Donor:</b> Du Pont <b>References:</b> [Schneider et al.(1991)]					
	<b>NOTES:</b>					
	<ul style="list-style-type: none"> <li>• 26/028: Epitope mapped by overlapping decapeptides – core: EEVGFPV [Schneider et al.(1991)]</li> </ul>					

## HIV Monoclonal Antibodies

MAb ID	Location	WEAVU	Sequence	Neutralizing	Immunogen	Species(Isotype)
783 13/058	Nef(60-73 BH10) <b>Donor:</b> Du Pont <b>References:</b> [Schneider et al.(1991)] <b>NOTES:</b> • 13/058: Epitope mapped by overlapping decapeptides – core: EEVGFPP [Schneider et al.(1991)]	Nef(58-71)	AQEEEEVGPVTPQ		rec Nef fragment	murine
784 AM5C6	Nef(28-43 + 78-92 BH10) <b>Donor:</b> Du Pont <b>References:</b> [Schneider et al.(1991)] <b>NOTES:</b> • AM5C6: Epitope mapped by overlapping decapeptides – core: KAAVDL – also reacts with Nef(28-43) [Schneider et al.(1991)]	Nef	DGVGAASRDLEKHGAI + KAAVDLSHFLK		rec Nef fragment	murine
785 31/03	Nef(82-103 BH10) <b>Donor:</b> Du Pont <b>References:</b> [Schneider et al.(1991)] <b>NOTES:</b> • 31/03: Epitope mapped by overlapping decapeptides – mapping suggests complex epitope in this region [Schneider et al.(1991)]	Nef(81-101)	AAVDLSHFLKKEKGLLEG- LIHS		rec Nef fragment	murine
786 F1	Nef(148-157 IIIB) <b>Donor:</b> Du Pont <b>References:</b> [Fujii et al.(1993), Otake et al.(1994), Fujii et al.(1996c), Fujii et al.(1996b)] <b>NOTES:</b> • F1: The C-term end of Nef is accessible to Abs at the cell surface – stained IIIB/M10, but not MN/M10, cells [Otake et al.(1994), Fujii et al.(1993)] • F1: Insect cells expressing myristylated Nef proteins on their cell surface can induce cytolysis of unstimulated CD4+ cells – this response is not due to MHC restricted CTL activity – the cell surface of Nef expressing insect cells carry Nef that can be recognized by MAbs E7 and E9 but not F1 [Fujii et al.(1996c)] • F1: A carboxy-terminal domain of Nef on the cell surface induces cytolysis of CD4+ T cells [Fujii et al.(1996b)]	Nef(146-155)	VEPDKVEEAN	?		murine(IgM)

## HIV Monoclonal Antibodies

Mab ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
787 2F2	Nef(151-170 BRU-LAD)	Nef(149-168)	DKVEEANKGENTSLLHP-VSL?		rec Nef protein	murine(IgG <sub>1</sub> )
	<p><b>Donor:</b> Du Pont</p> <p><b>References:</b> [Ovod et al.(1992), Saito et al.(1994), Ranki et al.(1995)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• 2F2: Strain specific (MN and BRU reactive, not IIB or RF) [Ovod et al.(1992)]</li> <li>• 2F2: Over-expression of Nef in astrocytes from postmortem pediatric CNS tissue [Saito et al.(1994)]</li> <li>• 2F2: One of four antibodies used in combination to show HIV Nef protein expressed in astrocytes from 7/14 brain samples from HIV+ individuals – Nef expression associated with dementia [Ranki et al.(1995)]</li> <li>• 2F2: UK Medical Research Council AIDS reagent: EVA3067.3</li> </ul>					
788 E9	Nef(158-206 IIB)	Nef(156-179)	KGENTSLHPVSLHGMD-DPEREVL		?	murine(IgM)
	<p><b>Donor:</b> Du Pont</p> <p><b>References:</b> [Fujii et al.(1993), Otake et al.(1994), Fujii et al.(1996c), Fujii et al.(1996b)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• E9: The C-term end of Nef is accessible to Abs at the cell surface – stained IIB/M10, but not MN/M10, cells [Otake et al.(1994), Fujii et al.(1993)]</li> <li>• E9: A carboxy-terminal domain of Nef on the cell surface induces cytolysis of CD4+ T cells [Fujii et al.(1996b)]</li> <li>• E9: Insect cells expressing myristylated Nef proteins on their cell surface can induce cytolysis of unstimulated CD4+ cells – this response is not due to MHC restricted CTL activity – the cell surface of Nef expressing insect cells carry Nef that can be recognized by MAbs E7 and E9 but not F1 [Fujii et al.(1996c)]</li> </ul>					
789 3E6	Nef(161-180 BRU-LAD)	Nef(159-178)	NTSLHPVSLHGMDPE-REV?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
	<p><b>Donor:</b> Du Pont</p> <p><b>References:</b> [Ovod et al.(1992), Saito et al.(1994), Ranki et al.(1995)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• 3E6: Reacted with Nef from different HIV-1 strains (BRU, IIB, RF, MN) [Ovod et al.(1992)]</li> <li>• 3E6: Faintly cross-reactive with astrocytes of uninfected control samples [Ranki et al.(1995)]</li> <li>• 3E6: UK Medical Research Council AIDS reagent: EVA3067.4</li> </ul>					

## HIV Monoclonal Antibodies

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
790 3A2	Nef(171-190 BRU-LAD)	Nef(169-188)	HGMDDPPEREVLEWRFDS- RLA?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<p><b>Donor:</b> Du Pont  <b>References:</b> [Ovod et al.(1992), Saito et al.(1994), Ranki et al.(1995)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• 3A2: Reacted with Nef from different HIV-1 strains (BRU, IIB, RF, MN) [Ovod et al.(1992)]</li> <li>• 3A2: Over-expression of Nef in astrocytes from postmortem pediatric CNS tissue [Saito et al.(1994)]</li> <li>• 3A2: One of four antibodies used in combination to show HIV Nef protein expressed in astrocytes from 7/14 brain samples from HIV+ individuals – Nef expression associated with dementia [Ranki et al.(1995)]</li> <li>• 3A2: UK Medical Research Council AIDS reagent: EVA3067.5</li> </ul>						
791 2A3	Nef(171-190 BRU-LAD)	Nef(169-188)	HGMDDPPEREVLEWRFDS- RLA?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<p><b>Donor:</b> Du Pont  <b>References:</b> [Ovod et al.(1992)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• 2A3: Reacted with Nef from different HIV-1 strains (BRU, IIB, MN, but not RF) [Ovod et al.(1992)]</li> </ul>						
792 2E4	Nef(171-190 BRU-LAD)	Nef(169-188)	HGMDDPPEREVLEWRFDS- RLA?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<p><b>Donor:</b> Du Pont  <b>References:</b> [Ovod et al.(1992)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• 2EA: Reacted with Nef from different HIV-1 strains (BRU, IIB, MN but not RF) [Ovod et al.(1992)]</li> </ul>						
793 2H12	Nef(171-190 BRU-LAD)	Nef(169-188)	HGMDDPPEREVLEWRFDS- RLA?		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<p><b>Donor:</b> Du Pont  <b>References:</b> [Ovod et al.(1992), Saito et al.(1994), Ranki et al.(1995)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• 2H12: Reacted with Nef from different HIV-1 strains (BRU, IIB, RF, MN) [Ovod et al.(1992)]</li> <li>• 2H12: Over-expression of Nef in astrocytes from postmortem pediatric CNS tissue [Saito et al.(1994)]</li> <li>• 2H12: One of four antibodies used in combination to show HIV Nef protein expressed in astrocytes from 7/14 brain samples from HIV+ individuals – Nef expression associated with dementia [Ranki et al.(1995)]</li> </ul>						

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MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
794 NF1A1	Nef(173-206) <b>Donor:</b> Du Pont <b>References:</b> [Kaminchik et al.(1990)] <b>NOTES:</b> • NF1A1: Recognizes the Nef protein of the two isolates BH10 and LAV1 – low affinity [Kaminchik et al.(1990)]	Nef(171-204)	MDDPPERVLEWRPDSRL-AFHVARELHPEYFKNC?	?		murine
795 E7	Nef(192-206 IIB) <b>Donor:</b> Du Pont <b>References:</b> [Fuji et al.(1993), Otake et al.(1994), Fuji et al.(1996c), Fuji et al.(1996b), Fuji et al.(1996d)] <b>NOTES:</b> • E7: The C-term end of Nef is accessible to Abs at the cell surface – stained IIB/M10, but not MN/M10, cells [Otake et al.(1994), Fuji et al.(1993)] • E7: Insect cells expressing myristylated Nef proteins on their cell surface can induce cytolysis of unstimulated CD4+ cells – this response is not due to MHC restricted CTL activity – the cell surface of Nef expressing insect cells carry Nef that can be recognized by MAbs E7 and E9 but not F1 [Fuji et al.(1996c)] • E7: Nef forms a homomeric oligomerizing structure, and using E7 and membrane immunofluorescence or immunoelectron microscopy, was shown to clusters on the surface of HIV-1 infected CD4+ cells [Fuji et al.(1996a)] • E7: A carboxy-terminal domain of Nef on the cell surface induces cytolysis of CD4+ T cells [Fuji et al.(1996b)] • E7: Soluble Nef inhibits proliferation of CD4+ cells, and Nef cross-linking by MAbs may induce anti-CD4 cytocidal activity – sera from HIV+ individuals contain soluble Nef, thus this may be important for immune dysfunction and disease progression [Fuji et al.(1996d)]	Nef(190-204)	HHVARELHPEYFKNC	?		murine(IgM)
796 NF8B4	Nef(dis BH10) <b>Donor:</b> Du Pont <b>References:</b> [Kaminchik et al.(1990)] <b>NOTES:</b> • NF8B4: Does not recognize NefCNBr cleavage products – recognizes intact BH10 Nef but not LAV1 Nef [Kaminchik et al.(1990)]	Nef(dis)	DISCONTINUOUS		recombinant BH10 Nef	murine
797 AE6	Nef(C-term) <b>Donor:</b> James Hoxie, Div of AIDS, NIAID, NIH <b>References:</b> [Greenway et al.(1994), Tornatore et al.(1994)] <b>NOTES:</b> • AE6: NIH AIDS Research and Reference Reagent Program: 709	Nef				murine

## HIV Monoclonal Antibodies

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
798 6.1	Nef(167-182, 191-205, 193-206 JR-CSF)	Nef(dis)	DISCONTINUOUS			murine
<p><b>Donor:</b> James Hoxie, Div of AIDS, NIAID, NIH  <b>References:</b> [Ranki et al.(1995)]</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>• 6.1: Raised against CNS primary isolates, strains astrocytes more densely than other Nef MAbs – Nef expression associated with dementia [Ranki et al.(1995)]</li> <li>• 6.1: NIAID Repository number 1123 [Ranki et al.(1995)]</li> </ul>						