



Table of HIV MAbs

MAB ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
901 3G12	Nef(51-71)	Nef( )	TNAACAWLEAQEEEEVGFPVT		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>2a</sub> )
<b>References:</b> [Ovod (1992)]						
• 3G12: Reacted with Nef from different HIV-1 strains (BRU, IIIB, RF, MN) [Ovod (1992)]						
902 26/028	Nef(60-73)	Nef(60-73 BH10)	AQEEEEVGFPVTPQ		rec Nef fragment	murine( )
<b>References:</b> [Schneider (1991)]						
• 26/028: Epitope mapped by overlapping decapeptides – core: EEVGFPV [Schneider (1991)]						
903 13/058	Nef(60-73)	Nef(60-73 BH10)	AQEEEEVGFPVTPQ		rec Nef fragment	murine( )
<b>References:</b> [Schneider (1991)]						
• 13/058: Epitope mapped by overlapping decapeptides – core: EEVGFP [Schneider (1991)]						
904 2E3	Nef(61-80)	Nef( )	QEEEEVGFPVTPQVPLRPMT		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<b>References:</b> [Ovod (1992), Nilsen (1996)]						
• 2E3: There are two MAbs with the name 2E3 – the other one binds to integrase [Nilsen (1996)]						
• 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 IIIB or RF) [Ovod (1992)]						
905 F14.11	Nef(83-88)	Nef(83-88)	AAVDLS		Nef peptide	murine(IgG <sub>2a</sub> κ)
<b>References:</b> [De Santis (1991), Chang (1998)]						
• F14.11: The MAb was made to a six aa region of Nef that is similar to a region found in thymosin α 1 protein – the MAb binds to the natural Nef protein [De Santis (1991)]						
• F14.11: Used as a control in a study of Nef-specific single chain Abs constructed from AG11 and EH1 [Chang (1998)]						
906 31/03	Nef(83-103)	Nef(82-103 BH10)	AAVDLSHFLKEKGGLELIHS		rec Nef fragment	murine( )
<b>References:</b> [Schneider (1991)]						
• 31/03: Epitope mapped by overlapping decapeptides – mapping suggests complex epitope in this region [Schneider (1991)]						

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MAB ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
907 F1	Nef(148–157) <b>References:</b> [Fujii (1993), Otake (1994), Fujii (1996c), Fujii (1996b)] • F1: The C-term end of Nef is accessible to Abs at the cell surface – stained IIIIB/M10, but not MN/M10, cells [Otake (1994), Fujii (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 (1996c)] • F1: A carboxy-terminal domain of Nef on the cell surface induces cytolysis of CD4+ T cells [Fujii (1996b)]	Nef(148–157 IIIIB) VEPKVVEEAN Fujii (1996c), Fujii (1996b)	?	?	rec Nef protein	murine(IgM)
908 2F2	Nef(151–170) <b>References:</b> [Ovod (1992), Saito (1994), Ranki (1995)] • 2F2: Strain specific (MN and BRU reactive, not IIIIB or RF) [Ovod (1992)] • 2F2: Over-expression of Nef in astrocytes from postmortem pediatric CNS tissue [Saito (1994)] • 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 (1995)] • 2F2: UK Medical Research Council AIDS reagent: EVA3067.3	Nef( ) DKVEEANKGENTSLHPVSL Ranki (1995)	DKVEEANKGENTSLHPVSL	?	rec Nef protein	murine(IgG <sub>1</sub> )
909 E9	Nef(158–181) <b>References:</b> [Fujii (1993), Otake (1994), Fujii (1996c), Fujii (1996b)] • E9: The C-term end of Nef is accessible to Abs at the cell surface – stained IIIIB/M10, but not MN/M10, cells [Otake (1994), Fujii (1993)] • E9: A carboxy-terminal domain of Nef on the cell surface induces cytolysis of CD4+ T cells [Fujii (1996b)] • 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 (1996c)]	Nef(158–206 IIIIB) KAGENTSLHPVSLHGMDDPER- EVL Fujii (1996c), Fujii (1996b)	KAGENTSLHPVSLHGMDDPER- EVL	?	?	murine(IgM)
910 3E6	Nef(161–180) <b>References:</b> [Ovod (1992), Saito (1994), Ranki (1995)] • 3E6: Reacted with Nef from different HIV-1 strains (BRU, IIIIB, RF, MN) [Ovod (1992)] • 3E6: Faintly cross-reactive with astrocytes of uninfected control samples [Ranki (1995)] • 3E6: UK Medical Research Council AIDS reagent: EVA3067.4	Nef( ) NTSLLHPVSLHGMDDPEREV Ranki (1995)	NTSLLHPVSLHGMDDPEREV		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )

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MAB ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
911 3A2	Nef(171-190)	Nef( )	HGMDDPEREVLWRFDSRLA		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<b>References:</b> [Ovod (1992), Saito (1994), Ranki (1995)] <ul style="list-style-type: none"> <li>• 3A2: Reacted with Nef from different HIV-1 strains (BRU, IIIB, RF, MN) [Ovod (1992)]</li> <li>• 3A2: Over-expression of Nef in astrocytes from postmortem pediatric CNS tissue [Saito (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 (1995)]</li> <li>• 3A2: UK Medical Research Council AIDS reagent: EVA3067.5</li> </ul>						
912 2A3	Nef(171-190)	Nef( )	HGMDDPEREVLWRFDSRLA		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<b>References:</b> [Ovod (1992)] <ul style="list-style-type: none"> <li>• 2A3: Reacted with Nef from different HIV-1 strains (BRU, IIIB, MN, but not RF) [Ovod (1992)]</li> </ul>						
913 2E4	Nef(171-190)	Nef( )	HGMDDPEREVLWRFDSRLA		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<b>References:</b> [Ovod (1992)] <ul style="list-style-type: none"> <li>• 2EA: Reacted with Nef from different HIV-1 strains (BRU, IIIB, MN but not RF) [Ovod (1992)]</li> </ul>						
914 2H12	Nef(171-190)	Nef( )	HGMDDPEREVLWRFDSRLA		Recombinant Nef protein (BRU isolate)	murine(IgG <sub>1</sub> )
<b>References:</b> [Ovod (1992), Saito (1994), Ranki (1995)] <ul style="list-style-type: none"> <li>• 2H12: Reacted with Nef from different HIV-1 strains (BRU, IIIB, RF, MN) [Ovod (1992)]</li> <li>• 2H12: Over-expression of Nef in astrocytes from postmortem pediatric CNS tissue [Saito (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 (1995)]</li> </ul>						

Table of HIV MAbs

MAB ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
915 E7	Nef(192-206) <b>References:</b> [Fujii (1993), Orake (1994), Fujii (1996c), Fujii (1996a), Fujii (1996b), Fujii (1996d)] <ul style="list-style-type: none"> <li>• E7: The C-term end of Nef is accessible to Abs at the cell surface – stained IIIB/M10, but not MN/M10, cells [Otake (1994), Fujii (1993)]</li> <li>• 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 [Fujii (1996c)]</li> <li>• 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 [Fujii (1996a)]</li> <li>• E7: A carboxy-terminal domain of Nef on the cell surface induces cytolysis of CD4+ T cells [Fujii (1996b)]</li> <li>• E7: Soluble Nef inhibits proliferation of CD4+ cells, and Nef cross-linking by MAbs may induce anti-CD4 cytotoxic activity – sera from HIV+ individuals contain soluble Nef, thus this may be important for immune dysfunction and disease progression [Fujii (1996d)]</li> </ul>	HHVARELHPEYFKNC	?	murine(IgM)		
916 AG11	Nef(194-206) <b>Donor:</b> Frank Jirik, Centre for Molecular Med and Therapeutics, U. B. C., Vancouver, B. C. Canada <b>References:</b> [Chang (1998)] <ul style="list-style-type: none"> <li>• AG11: The light and heavy chains of three MABs (AG11, AE6, EH1) specific to C-terminus of NEF were cloned and variable regions sequenced – the complementarity determining regions (CDR) of AG11 and AE6 were highly related (95.1% at the DNA level) and bound LAI Nef, but not SF2 Nef – EH1 bound to SF2 and LAI and cross-competed AG11 and AE6 but had a distinctive CDR (57.9% similar to AG11) – single chain Abs were constructed from AG11 and EH1 and subcloned into a eukaryotic expression vector with a green fluorescent protein marker to allow intracellular expression – the single chain Abs bind Nef intracellularly and may be useful to better understand the role of Nef and as a gene therapy model [Chang (1998)]</li> </ul>	VARELHPEYFKNC	rec NEF	murine(IgG <sub>1</sub> κ)		
917 AE6	Nef(194-206) <b>Donor:</b> Frank Jirik, Centre for Molecular Med and Therapeutics, U. B. C., Vancouver, B. C. Canada <b>References:</b> [Chang (1998)] <ul style="list-style-type: none"> <li>• AE6: The light and heavy chains of three MABs (AG11, AE6, EH1) specific to C-terminus of NEF were cloned and variable regions sequenced – the complementarity determining regions (CDR) of AG11 and AE6 were highly related (95.1% at the DNA level) and bound LAI Nef, but not SF2 Nef – EH1 bound to SF2 and LAI and cross-competed AG11 and AE6 but had a distinctive CDR (57.9% similar to AG11) – single chain Abs were constructed from AG11 and EH1 [Chang (1998)]</li> </ul>	VARELHPEYFKNC	rec NEF	murine(IgG <sub>1</sub> κ)		

Table of HIV MABs

MAB ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
918 EHI	Nef(194–206)	Nef( )	MARELHPEYYKDC		rec Nef	murine(IgG <sub>1</sub> κ)
	<p><b>Donor:</b> Frank Jirik, Centre for Molecular Med and Therapeutics, U. B. C., Vancouver, B. C. Canada</p> <p><b>References:</b> [Chang (1998)]</p> <ul style="list-style-type: none"> <li>• EHI: The light and heavy chains of three MABs (AG11, AE6, EHI) specific to C-terminus of NEF were cloned and variable regions sequenced – the complementarity determining regions (CDR) of AG11 and AE6 were highly related (95.1% at the DNA level) and bound LAI Nef, but not SF2 Nef – EHI bound to SF2 and LAI and cross-competed AG11 and AE6 but had a distinctive CDR (57.9% similar to AG11) – single chain Abs were constructed from AG11 and EHI and subcloned into a eukaryotic expression vector with a green fluorescent protein marker to allow intracellular expression – the single chain Abs bind Nef intracellularly and may be useful to better understand the role of Nef and as a gene therapy model [Chang (1998)]</li> </ul>					
919 NF2B2	Nef( )	Nef(20-78 BH10)			recombinant BH10 Nef	murine( )
	<p><b>References:</b> [Kaminchik (1990)]</p> <ul style="list-style-type: none"> <li>• NF2B2: Recognizes the Nef protein of the two isolates BH10 and LAV1 [Kaminchik (1990)]</li> <li>• NF2B2: NIH AIDS Research and Reference Reagent Program: 456</li> </ul>					
920 NF3A3	Nef( )	Nef(20-78 BH10)			rec BH10 Nef	murine( )
	<p><b>References:</b> [Kaminchik (1990)]</p> <ul style="list-style-type: none"> <li>• NF3A3: Recognizes the Nef protein of the two isolates BH10 and LAV1 – low affinity [Kaminchik (1990)]</li> </ul>					
921 AM5C6	Nef(dis)	Nef(28-43 + 78–92 BH10)	DGVGAASRDLEKKGAI + KA-AVDLSHFLK		rec Nef fragment	murine( )
	<p><b>References:</b> [Schneider (1991)]</p> <ul style="list-style-type: none"> <li>• AM5C6: Epitope mapped by overlapping decapeptides – core: SRDL – also reacts with Nef(78-92) [Schneider (1991)]</li> </ul>					
922 AM5C6	Nef(dis)	Nef(28-43 + 78–92 BH10)	DGVGAASRDLEKKGAI + KA-AVDLSHFLK		rec Nef fragment	murine( )
	<p><b>References:</b> [Schneider (1991)]</p> <ul style="list-style-type: none"> <li>• AM5C6: Epitope mapped by overlapping decapeptides – core: KAAVDL – also reacts with Nef(28-43) [Schneider (1991)]</li> </ul>					
923 NF8B4	Nef(dis)	Nef(Nef dis BH10)			recombinant BH10 Nef	murine( )
	<p><b>References:</b> [Kaminchik (1990)]</p> <ul style="list-style-type: none"> <li>• NF8B4: Does not recognize Nef CNBr cleavage products – recognizes intact BH10 Nef but not LAV1 Nef [Kaminchik (1990)]</li> </ul>					

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MAB ID	HXB2 Location	Author's Location	Sequence	Neutralizing	Immunogen	Species (Isotype)
924 AE6	Nef( )	Nef(Nef C-term) Donor: James Hoxie, Div of AIDS, NIAID, NIH References: [Greenway (1994), Tornatore (1994)] • AE6: NIH AIDS Research and Reference Reagent Program: 709				murine( )
925 6.1	Nef(dis)	Nef(167-182, 191-205, 193-206 JR-CSF) References: [Ranki (1995)] • 6.1: Raised against CNS primary isolates, stains astrocytes more densely than other Nef MAbs – Nef expression associated with dementia [Ranki (1995)] • 6.1: NIAID Repository number 1123 [Ranki (1995)]				murine( )