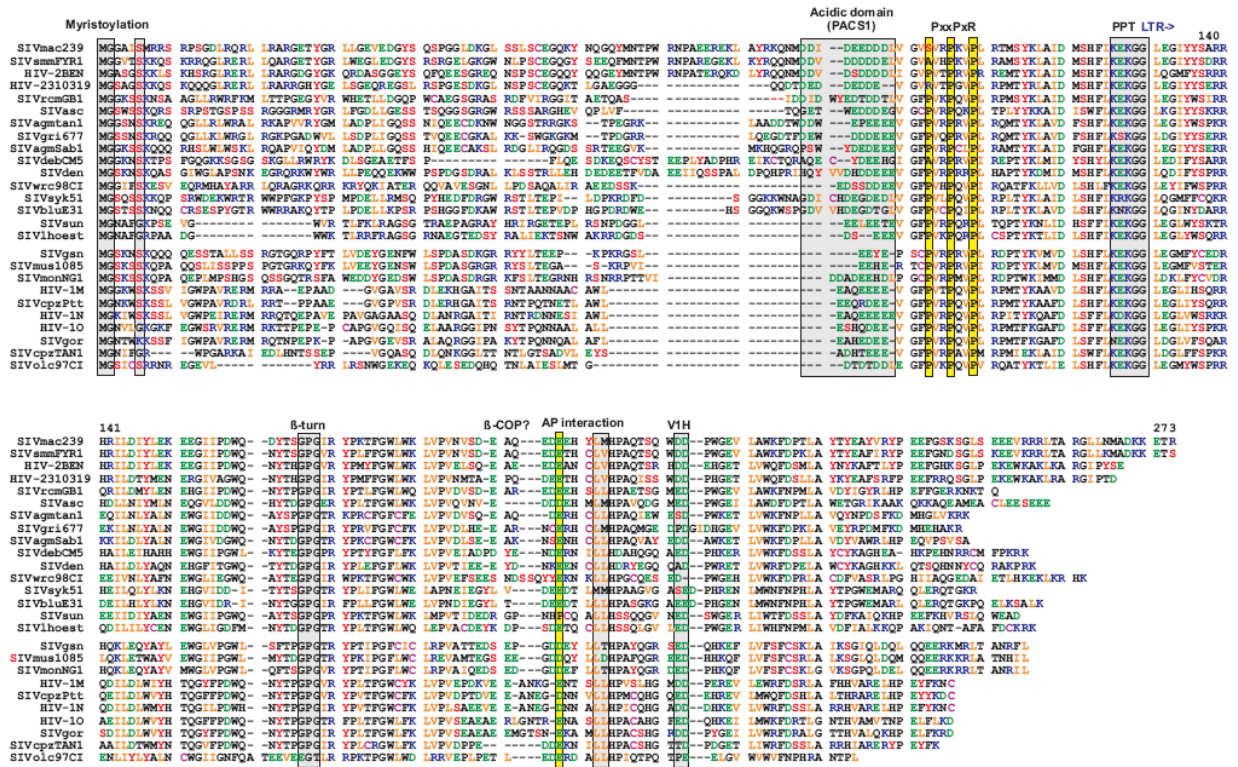


**Table S1.** Overview on the activity of primate lentiviral Nef proteins in selected assays and the presence of a *vpu* gene.

Virus	Species/subspecies	Nef function						<i>vpu</i>	Teth-Ant.
		CD4	MHC-I	CD3	CD28	Repl.	Inf.		
HIV-1 M	Human ( <i>Homo sapiens</i> )	+++	++	-	(+)	++	++	+	Vpu
HIV-1 O	Human ( <i>Homo sapiens</i> )	+++	++	-	(+)	++	++	+	?*
HIV-1 N	Human ( <i>Homo sapiens</i> )	+++	++	-	(+)	++	++	+	Vpu
SIVcpz	centrl West. Chimpanzee ( <i>Pan troglodytes troglodytes</i> )	+++	++	-	+	++	++	+	Nef
SIVcpz	Eastern Chimpanzee ( <i>Pan troglodytes schweinfurthii</i> )	+++	++	-	+	++	++	+	Nef
SIVgor	Western lowland gorilla ( <i>Gorilla gorilla gorilla</i> )	+++	++	-	+	++	++	+	Nef
SIVgsn	Greater spot-nosed monkey ( <i>Cercopithecus nictitans</i> )	+++	++	-	+	++	+++	+	Vpu
SIVmus	Mustached monkey ( <i>Cercopithecus cephus</i> )	+++	++	-	(+)	++	++	+	Vpu
SIVmon	Mona monkey ( <i>Cercopithecus mona</i> )	+++	++	-	+	++	+++	+	Vpu
SIVden	Dent's Mona monkey ( <i>Cercopithecus mona denti</i> )	++	++	+	+	+	++	+	Vpu
SIVrcm	Red-capped mangabey ( <i>Cercocebus torquatus</i> )	+++	(+)	+	-	++	++	-	Nef
HIV-2	Human ( <i>Homo sapiens</i> )	+++	++	++	++	+	++	-	Env#
SIVsmm	Sooty mangabey ( <i>Cercocebus atys</i> )	+++	++	++	++	++	+++	-	Nef
SIVmac	Rhesus macaque ( <i>Maccaca mulatta</i> )	+++	++	++	++	++	+++	-	Nef
SIVdeb	De Brazza monkey ( <i>Cercopithecus neglectus</i> )	++	+	+++	++	+++	+++	-	n.d.
SIVsyk	Sykes' monkey ( <i>Cercopithecus albogularis</i> )	+++	+	++	++	++	++	-	n.d.
SIVasc	Red-tailed monkey ( <i>Cercopithecus ascanius</i> )	+++	++	++	++	+	-	-	? <sup>+</sup>
SIVblu	Blue monkey ( <i>Cercopithecus mitis</i> )	+++	++	+++	+++	++	++	-	n.d.
SIVsun	Sun-tailed monkey ( <i>Cercopithecus solatus</i> )	++	+	+++	+	++	++	-	n.d.
SIVlho	L'Hoest monkeys ( <i>Cercopithecus lhoesti</i> )	++	+	++	+	++	++	-	Nef
SIVtan	Tantalus monkey ( <i>Chlorocebus tantalus</i> )	+++	++	+++	+++	++	++	-	Nef
SIVagm	Green monkey ( <i>Chlorocebus sabaesus</i> )	++	++	+++	+++	++	++	-	Nef/Env
SIVgri	Grivet monkey ( <i>Chlorocebus aethiops</i> )	++	++	+++	++	++	+	-	Nef
SIVwrc	Western Red Colobus ( <i>Piliocolobus badius</i> )	+++	++	+++	+++	++	++	-	Nef
SIVolc	Olive Colobus ( <i>Procolobus verus</i> )	+++	++	-	+	++	++	-	Nef

Activity was measured by FACS or in *in vitro* assays for viral infectivity and replication as described (39, 51). Abbreviations: +++, high; ++, moderate; +, weak; (+) marginal and -, no activity; Repl., replication; Inf., infectivity; Teth-Ant.; tetherin antagonist. The properties of the indicated primate lentiviral Nef proteins and other tetherin antagonists are described in the present study or have been described previously (26, 39, 48, 51, 45, 11, 63, 64). Note that the data are preliminary because for some species only a very limited number of *nef* alleles has been analyzed and because most data were generated in human-derived cells. \*HIV-1 O Vpus and Nefs do not antagonize tetherin (48, 63) but it remains to be clarified whether they counteract this restriction factor by a different mechanism. #Only shown for HIV-2 group A Nef. <sup>+</sup>The SIVasc Nef has not been tested with tetherin from its natural host.



**FIG. S1.** Alignment of primate lentiviral Nef amino acid sequences. Sequences were grouped based on their ability to down-modulate TCR-CD3 (upper) or not (lower). Dashes indicate gaps introduced to optimize the alignment. Acidic residues (E, D) are highlighted in green, basic residues (K, R) in blue, hydrophobic residues (I, V, L) in orange and residues that can potentially be phosphorylated (S, T, Y) in red. Some conserved sequence elements in Nef, the position of the polyprotein tract (PPT), and the start of the 3' long terminal repeat (LTR) are indicated. VIH, catalytic subunit of vacuolar ATPase.