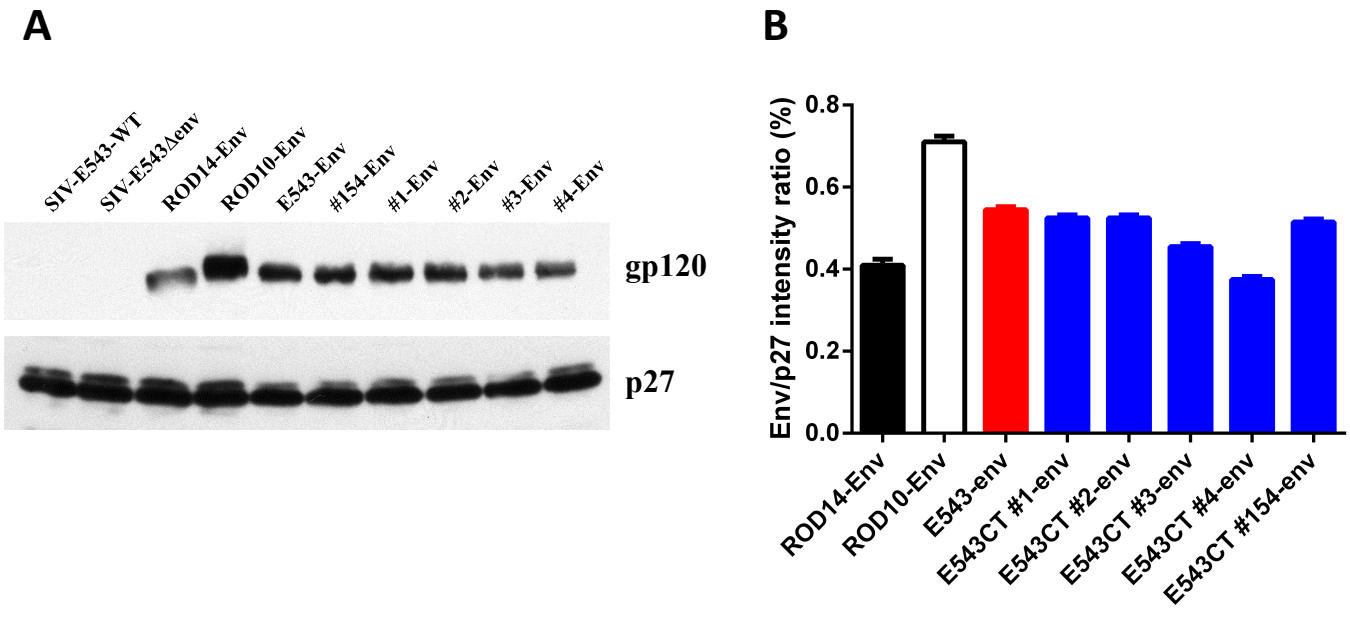
Primers	
gag-R	TGA CGC AGA CAG TAT TAT AAA GGC TC
R-R	TGC TTA CTT CTA AAT GGC AGC TTT
R-F	CAGTCG CTC TGC GGA GAG GCT GG
Bgl-F	GGC AGC AGA TCT TGG CCT TGG C
nefend-R	GCC TCT TGC GGT TAG CCT TC
env10651-F	GAT GTG CTT TTA GGC AAG
nefstart-R	TAT ATT TCT GAG GCT CAC AAG AGA G
Hind-R	GAC CAT GAT TAC GCC AAG CTT
nefend-F	GAA GGC TAA CCG CAA GAG GC
nefstart-F	CTC TCT TGT GAG CCT CAG AAA TAT A
9341-R	CAT CAT CCA CAT CAT CCA TG
6463-F	GGT GTT GCT ATC ATT GTC AGC

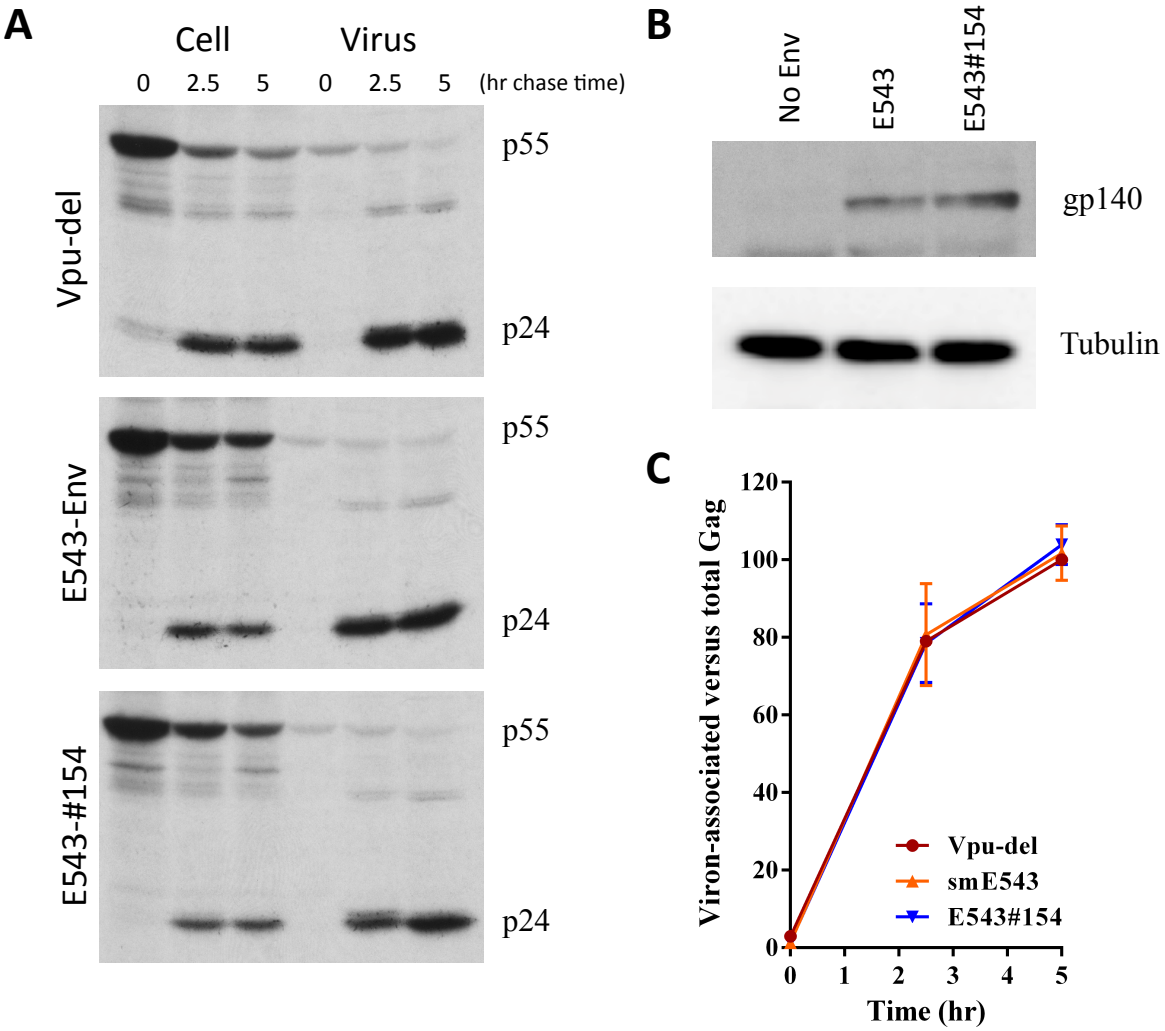
Supplemental Table 1: Primers used for construction of chimeric SIV and obtaining cDNA from viral stocks for sequencing.

Clones		Forward Primer	Reverse Primer
SIVsm543CT #1		GGA TCT ACC AGA CCC TCC AAC CAG TG	CAC TGG TTG GAG GGT CTG GTA GAT CC
SIVsm543CT #2		CAG AAT TGA AAG AAC CTA CCT AC	GTA GGT AGG TTC TTT CAA TTC TG
SIVsm543CT #3		CAG AAT TGA AAT AGC CTA CCT AC	GTA GGT AGG CTA TTT CAA TTC TG
SIVsm543CT #4		CCC TAG GCG CAT CAG GCA AGG GC	GCC CTT GCC TGA TGC GCC TAG GG
SIVsm543CT #154	1st PCR	CAG AAT TGA AAG AGC CTA CCT AC	GTA GGT AGG CTC TTT CAA TTC TG
	2nd PCR	GGA TCT ACC AGA CCC TCC AAC CAG TG	CAC TGG TTG GAG GGT CTG GTA GAT CC
	3rd PCR	CCC TAG GCG CAT CAG GCA AGG GC	GCC CTT GCC TGA TGC GCC TAG GG

Supplemental Table 2: Primers used for introducing point mutations to gp41 cytoplasmic tail of SIVsmE543.



Supplemental Figure 1: Assessment of Virion incorporation of Envelope. (A) 293T cells were transfected with 4 μg of pSIV-E543 WT or pSIV-E543Δenv DNA in the presence or absence of pHA-smE543-Env (SIVsmE543-3), pHA-E543#1 (SIVsmE543CT #1), pHA-E543#2 (SIVsmE543CT #2), pHA-E543#3 (SIVsmE543CT #3), pHA-E543#4 (SIVsmE543CT #4) and pHA-E543#154 (SIVsmE543CT #154) as indicated. Supernatants were collected 24 hour after transfection. A fraction of the cell-free virus (80%) was pelleted through a 20% sucrose cushion and suspended in sample buffer for immunoblot analysis (virus). Samples were separated by SDS-PAGE and analyzed with antibodies to HA (Envelope) or SIV Ig-p27 (Gag: Advanced Bioscience Laboratories, Rockville, MD (cat# 4323)) as indicated. A representative of two independent experiments is shown. (B) Relative amounts of Envelope and Gag (p27) ratio were calculated. Data represent means +/- SEM from two independent analyses.



Supplemental Figure 2: **HIV-1 particle release in the absence of BST-2.** (A) Kinetic analysis of viral particle release by the Vpu-deficient pNL4-3/Udel-1 in the presence of HIV-2 Env or SIVsm Env. 293T cells were transfected with pNL4-3/Udel-1 together with vectors for the expression of HA-tagged Envs from SIVsmE543 wt or mutant SIVsmE543#154. Samples were subjected to pulse-chase analysis and viral proteins recovered by immunoprecipitation were separated by SDS–PAGE. The HIV-1 major Gag proteins p55gag and p24CA are identified on the right. (B) Protein expression for Env was verified by western blot analysis using cellular α-tubulin as a loading control. (C) Bands corresponding to the precursor and mature Gag proteins in panel A were quantified and the efficiency of particle release at each time point was calculated and plotted as a function of time. Maximal release of Vpu-del virus at 5 hr chase was defined as 100%. All other data points were normalized accordingly. No statistical significances of differences between particle release kinetics in the presence of SIVsmE543 or mutant SIVsmE543#154 Env proteins were observed compared to the cells transfected with only pNL4-3/Udel-1 vector, as assessed by the repeated measures two-way ANOVA ($F(2, 3) = 0.004609$, $P = 0.9954$).