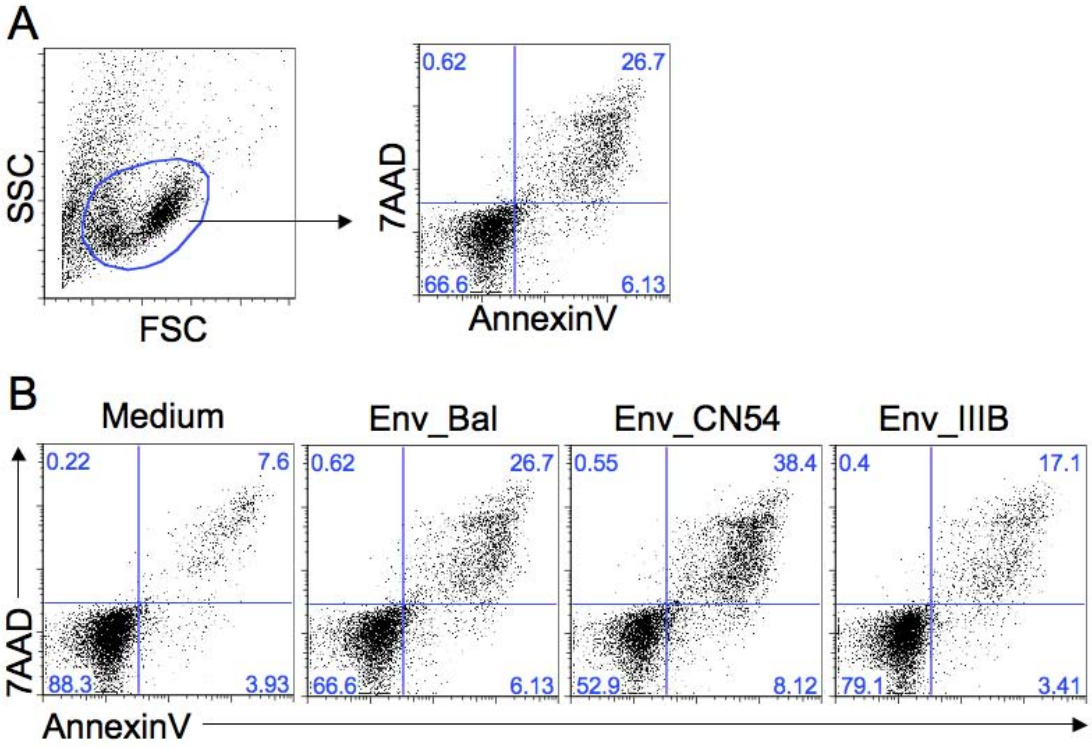


Figure S1. HIV R5-tropic envelope glycoprotein induces Vγ2Vδ2 T-cell death
Vγ2Vδ2 T cells were purified by negative selection and incubated with soluble HIV gp120 proteins (BaL, CN54 or IIIB; 10 μg/ml) for 24 hours. (A) A representative gating strategy. (B) Cell death was examined with flow cytometry based on Annexin V and 7AAD staining.

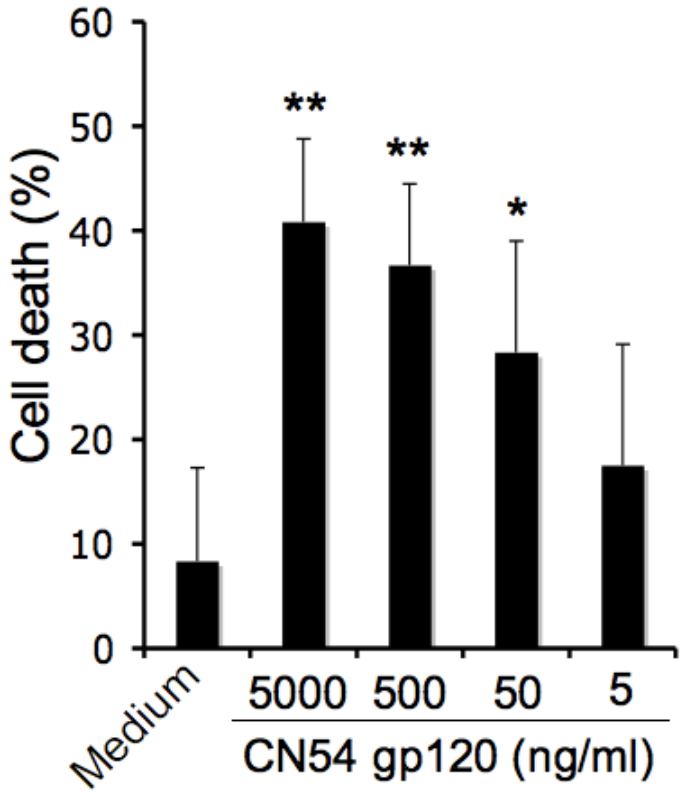


Figure S2. HIV R5-tropic envelope induced Vγ2Vδ2 T-cell death
Cell death was examined after Vγ2Vδ2 T cells were incubated with soluble HIV CN54 gp120 at different concentrations for 24 hours as described in *Materials and Methods*. The statistical significance compared with control was analyzed. *P<0.05, **P<0.005 (Student's t test). Data are representative of three independent experiments (error bars, SD).

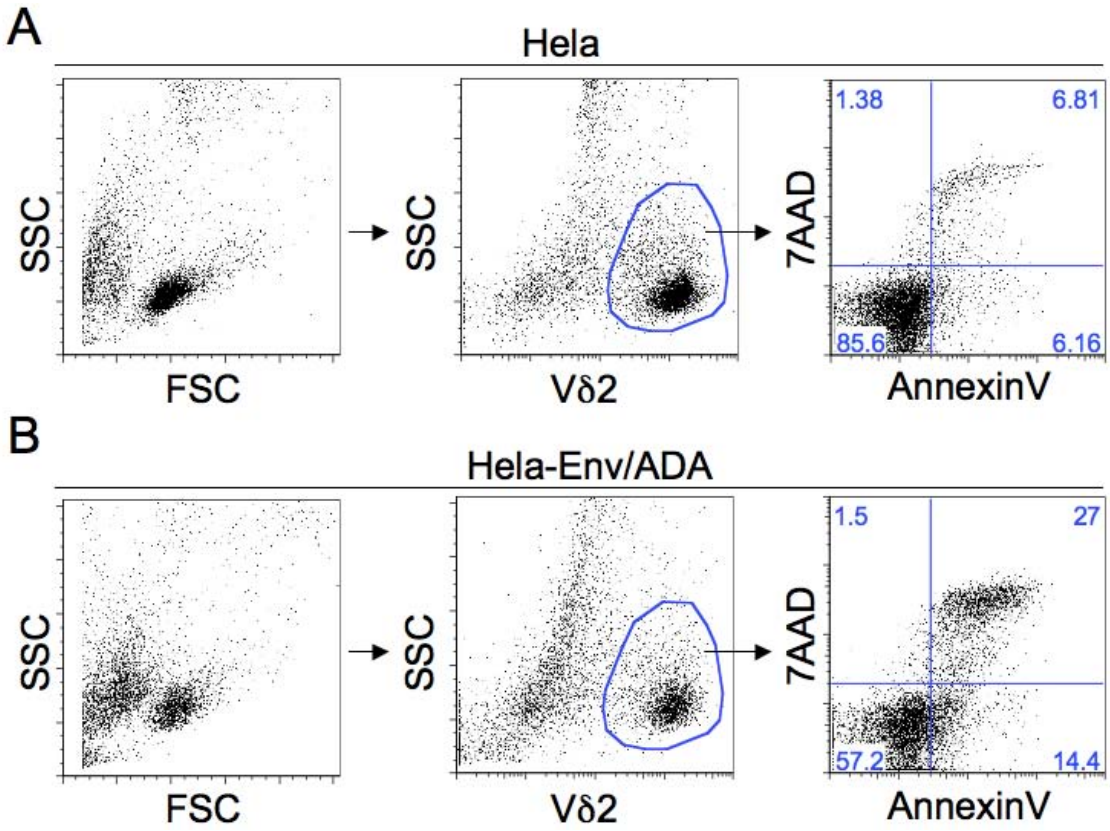


Figure S3. Cell associated HIV R5-tropic envelope glycoprotein induces Vγ2Vδ2 T-cell death

Vγ2Vδ2 T cells were purified by negative selection and incubated with HeLa cells (A) or HeLa cells expressing HIV ADA-envelope (B) at ratio 2:1 for 24 hours. Cell death was examined with flow cytometry based on Annexin V and 7AAD staining.

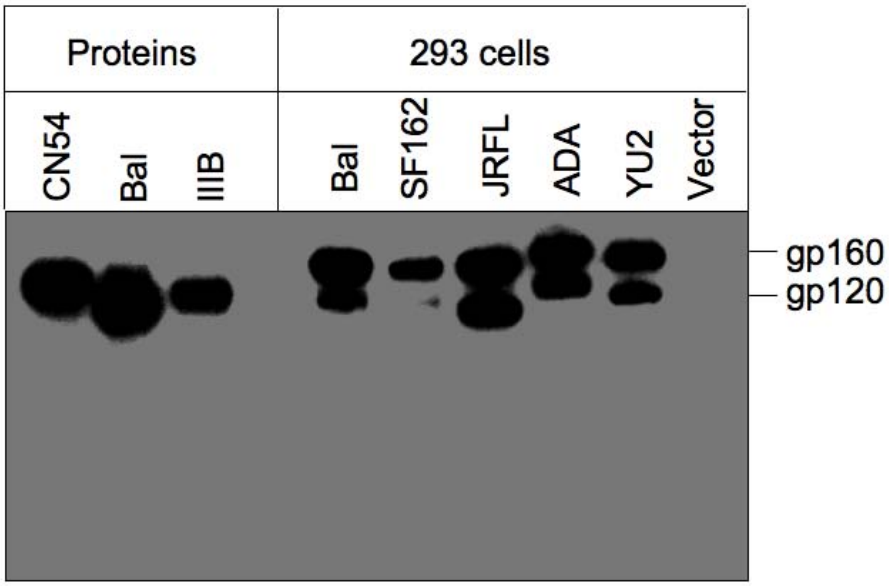


Figure S4. Expression of gp120 in 293 cells transfected with plasmid expressing the envelope cDNA

293 cells were transiently transfected with an empty vector, or plasmid expressing the envelope cDNA of the HIV R5 strain BaL, SF162, JRFL, ADA and YU2. After 48 hours, Transfected 293T cells or supernatants were collected for western blotting assay with polyclonal antiserum specific for HIV gp120. Purified gp120 of CN54, Bal and IIIB were used as positive controls.

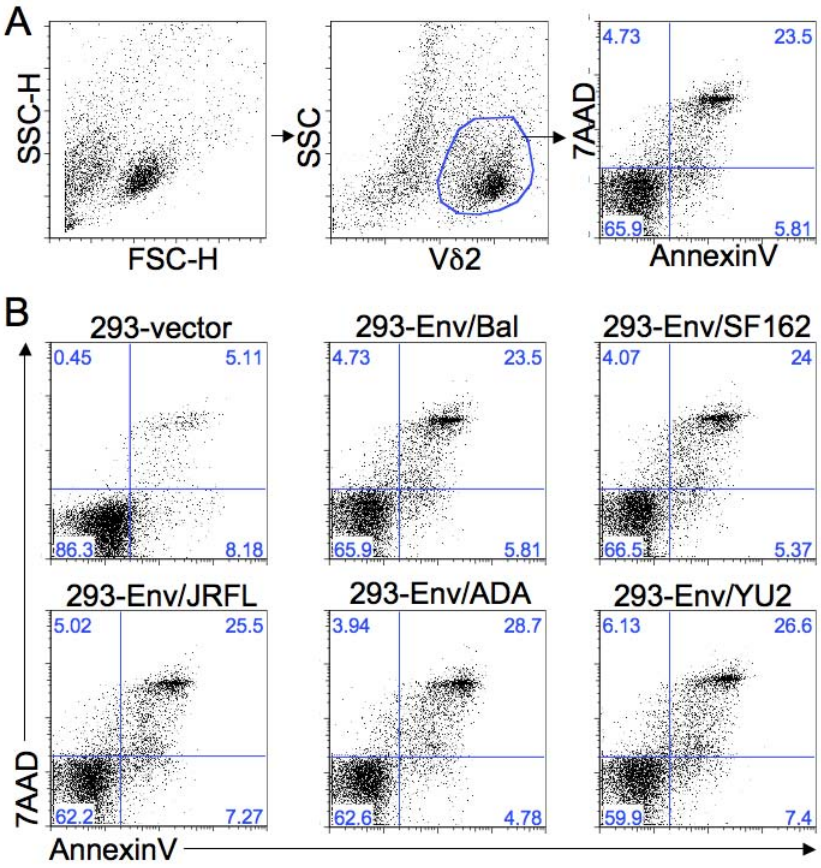


Figure S5. Cell associated HIV R5-tropic envelope glycoprotein induces Vγ2Vδ2 T-cell death

Vγ2Vδ2 T cells were purified by negative selection and incubated with 293 cells transfected with empty vector or 293T cells expressing envelopes (BaL, SF162, JRFL, ADA or YU2) at ratio 2:1 for 24 hours. (A) A representative gating strategy. (B) Cell death was examined with flow cytometry based on Annexin V and 7AAD staining.

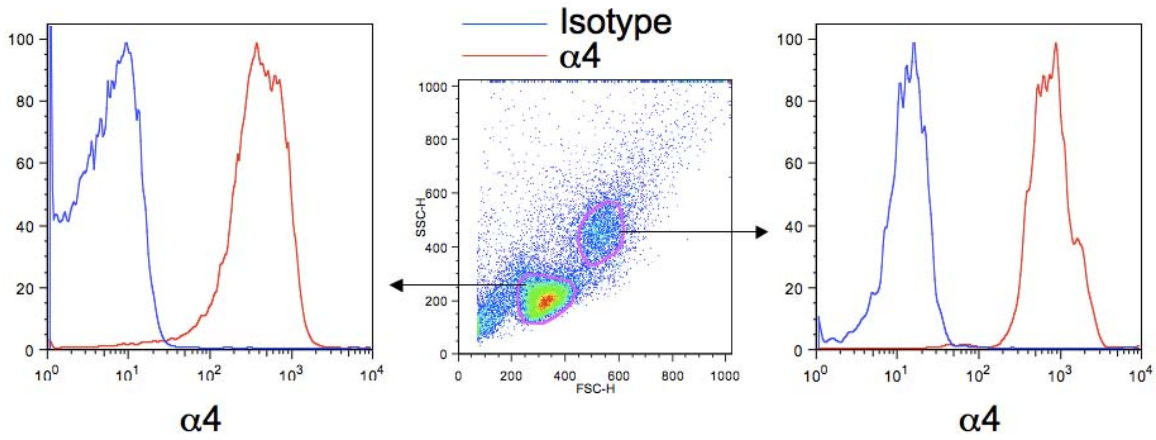


Figure S6. Expression of *α*4 in different subsets of PBMC
PBMC was stained with specific antibodies to *α*4 (red line) and isotype controls (blue line), and analyzed with flow cytometry. Data are representative of three or more independent experiments.

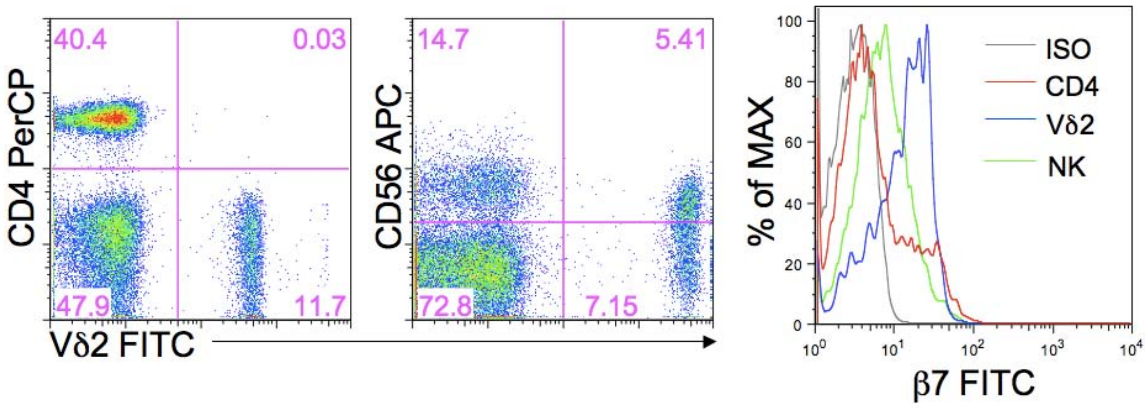
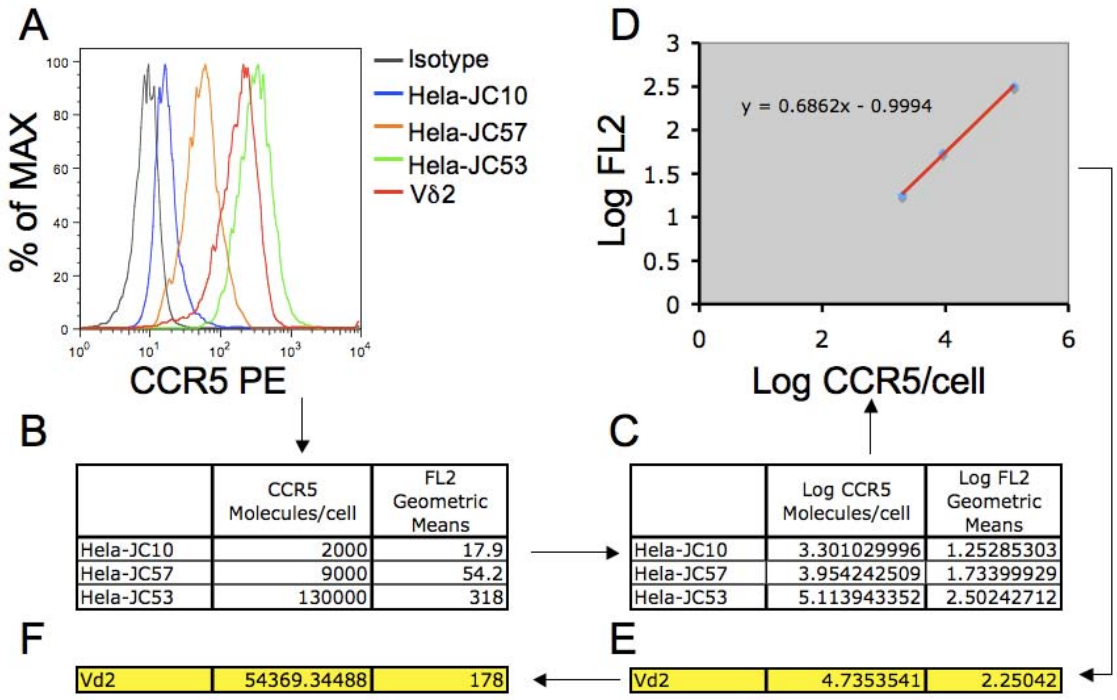


Figure S7. Expression of β7 in different subsets of PBMC
PBMC was stained with specific antibodies to Vδ2-FITC, CD4-PerCP, CD56-APC or α4-PE as well as isotype controls. The expression of β7 on Vδ2 T cell (blue line), CD4 T cell (red line) and NK cell (CD56+Vδ2-, green line) was analyzed with flow cytometry. Data are representative of three or more independent experiments.



	CCR5 Molecules/cell	FL2 Geometric Means
Hela-JC10	2000	17.9
Hela-JC57	9000	54.2
Hela-JC53	130000	318

	Log CCR5 Molecules/cell	Log FL2 Geometric Means
Hela-JC10	3.301029996	1.25285303
Hela-JC57	3.954242509	1.73399929
Hela-JC53	5.113943352	2.50242712

Vd2	4.7353541	2.25042

Vd2	54369.34488	178

Figure S8. Determine CCR5 density on Vγ2Vδ2 T cells
(A) Vγ2Vδ2 T cells and three standard HeLa cell lines (JC10, JC57 and JC53) with identified CCR5 density were stained with CCR5-PE and isotype control, and analyzed with flow cytometry. (B) On a statistics spreadsheet, enter the geometric means from the Histogram Statistics view (A) for the 3 standard HeLa cell lines and their CCR5 densities. (C) Calculate the Log10 for the geometric means and CCR5 densities. (D) Plot a linear regression of Log10 geometric means against Log10 CCR5 densities. (E, F) To determine the CCR5 density of Vγ2Vδ2 T cells, substitute Log10 geometric means in the equation and solve for Log10 CCR5 density. Determine the anti-Log to get the CCR5 density of Vγ2Vδ2 T cells.

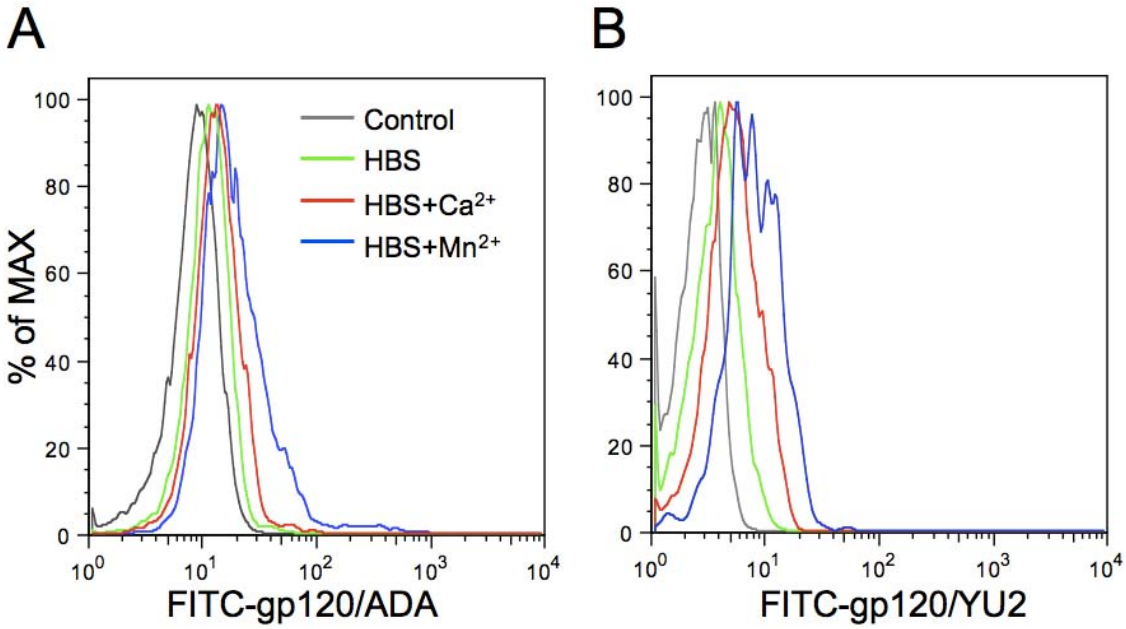


Figure S9. Binding of gp120 to Vγ2Vδ2 T cells in different binding buffers
Vγ2Vδ2 T cells were stained with fluorescene conjugated gp120 proteins derived from ADA (A) and YU2 (B) in HBS buffer in absence or presence of Ca2+ or Mn2+, and analyzed with flow cytometry. Data are representative of three independent experiments.

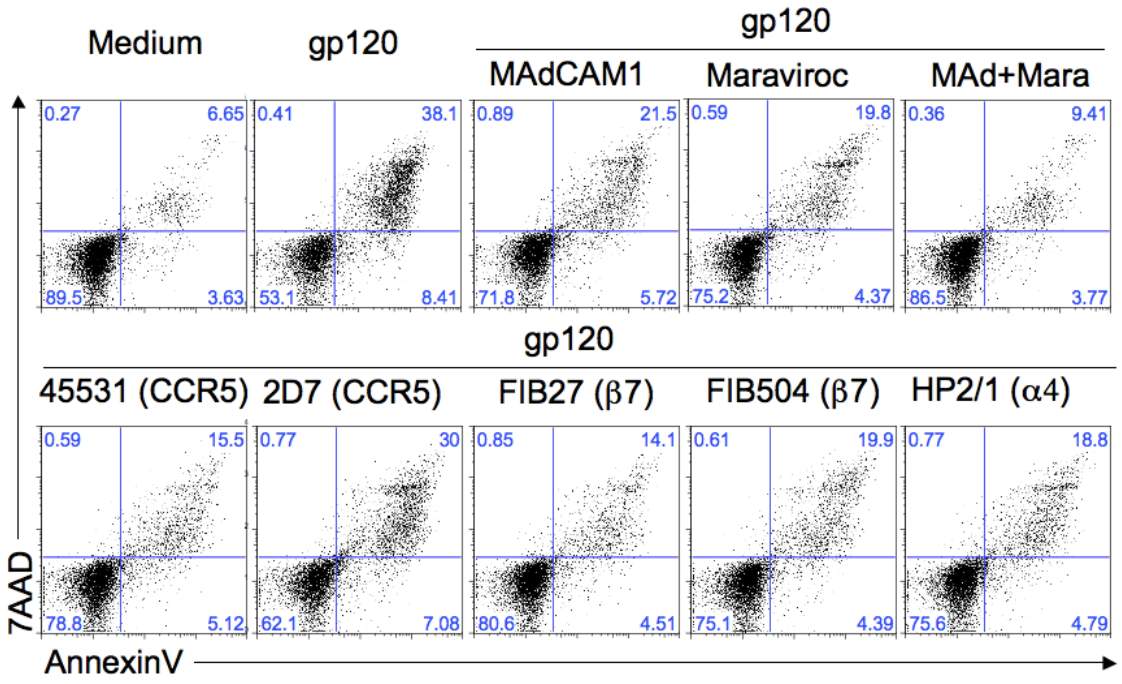


Figure S10. HIV envelope-induced killing of Vγ2Vδ2 T cells depends on α4β7 and CCR5

Vγ2Vδ2 T cells were purified by negative selection. Vγ2Vδ2 T cells were pretreated with Maraviroc (1 μM), MAdCAM1 (20μg/ml), or both, or with different specific mAbs to CCR5, β7 or α4 (20 μg/ml) for 30 min before incubated with soluble HIV gp120 protein (CN54, 10 μg/ml) for 24 hours. Cell death was examined with flow cytometry based on Annexin V and 7AAD staining.

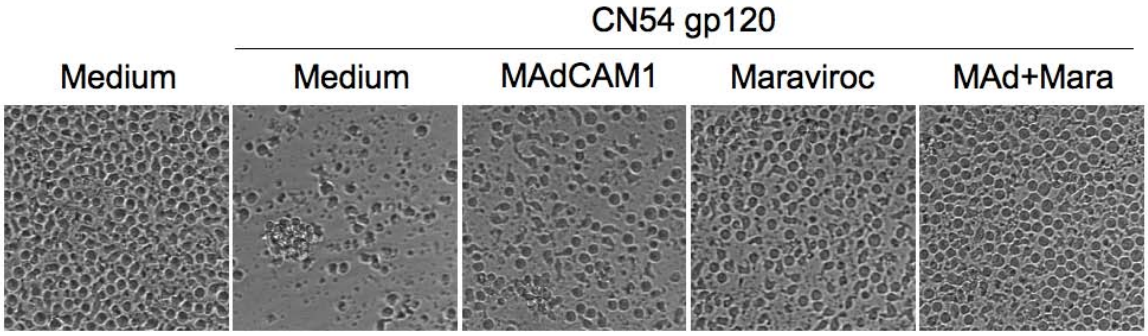


Figure S11. HIV envelope-induced Vγ2Vδ2 T-cell death is dependent on α4β7 and CCR5

Vγ2Vδ2 T cells were incubated with or without Maraviroc (1 μM), MAdCAM1 (20μg/ml), or both for 1 hour followed by incubation with soluble HIV gp120 protein (CN54, 10 μg/ml) for 24 hours, then observed under microscope. Data are representative of three independent experiments.

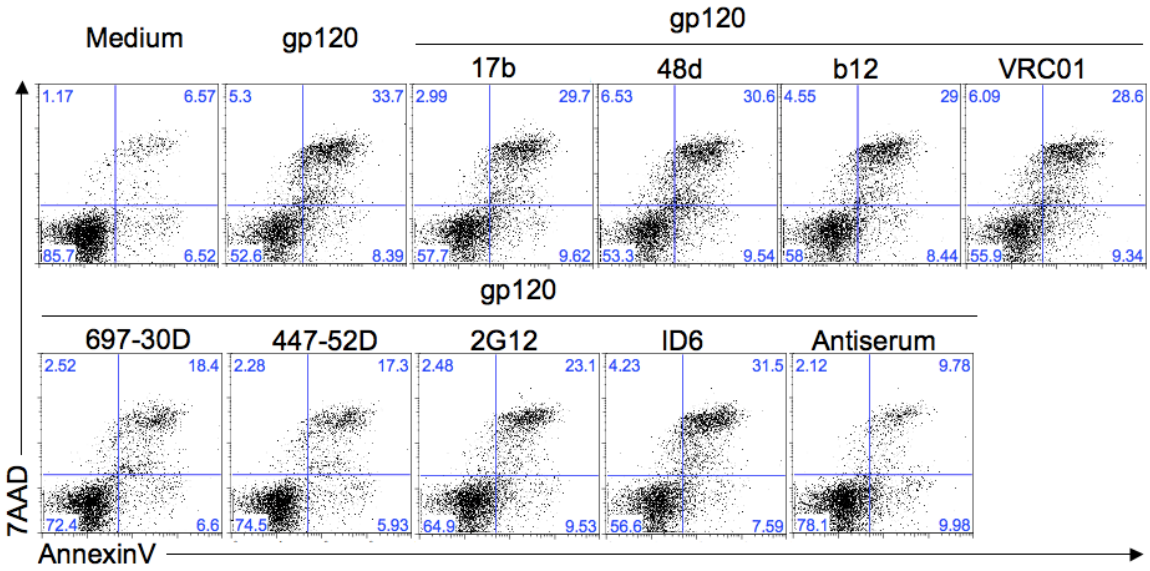


Figure S12. gp120 V2 and V3 loops mediate killing of Vγ2Vδ2 cells
Vγ2Vδ2 T cells were purified by negative selection. CN54 gp120 was pre-incubated with specific mAbs to gp120 (20μg/ml) for 30 minutes at room temperature, then the mixture was added to Vγ2Vδ2 T cells and incubated for 24 hours. Cell death was examined with flow cytometry based on Annexin V and 7AAD staining.

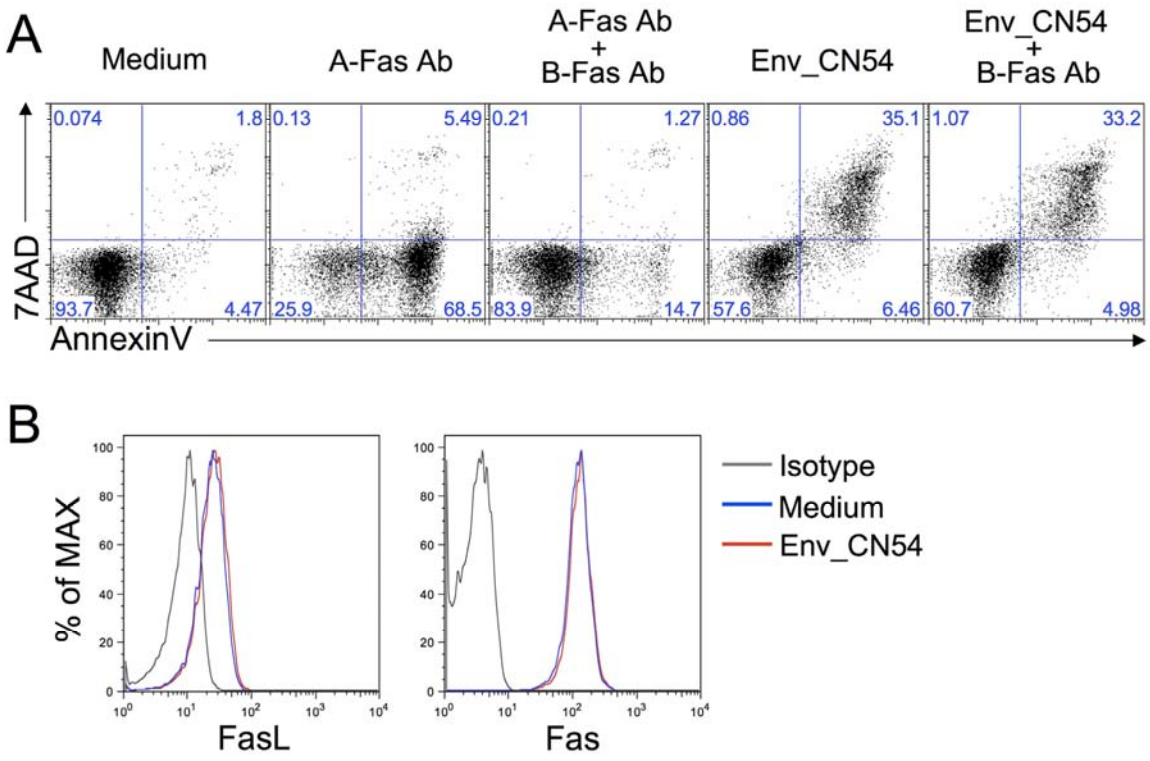


Figure S13. gp120-mediated killing of Vγ2Vδ2 cells is Fas-independent
(A)Vγ2Vδ2 T cells were purified by negative selection and pre-incubated with or without blocking Fas antibody (B-Fas Ab, clone ZB4, 500 ng/ml) for 1 hour, then the cells were treated with activating Fas antibody (A-Fas Ab, clone CH11, 1μg/ml) for 6 hours or CN54 gp120 for 24 hours. Cell death was examined with flow cytometry based on Annexin V and 7AAD staining. (B) Vγ2Vδ2 T cells were incubated with or without CN54 gp120 for 10 hours. The expression of FasL or Fas were examined with flow cytometry.