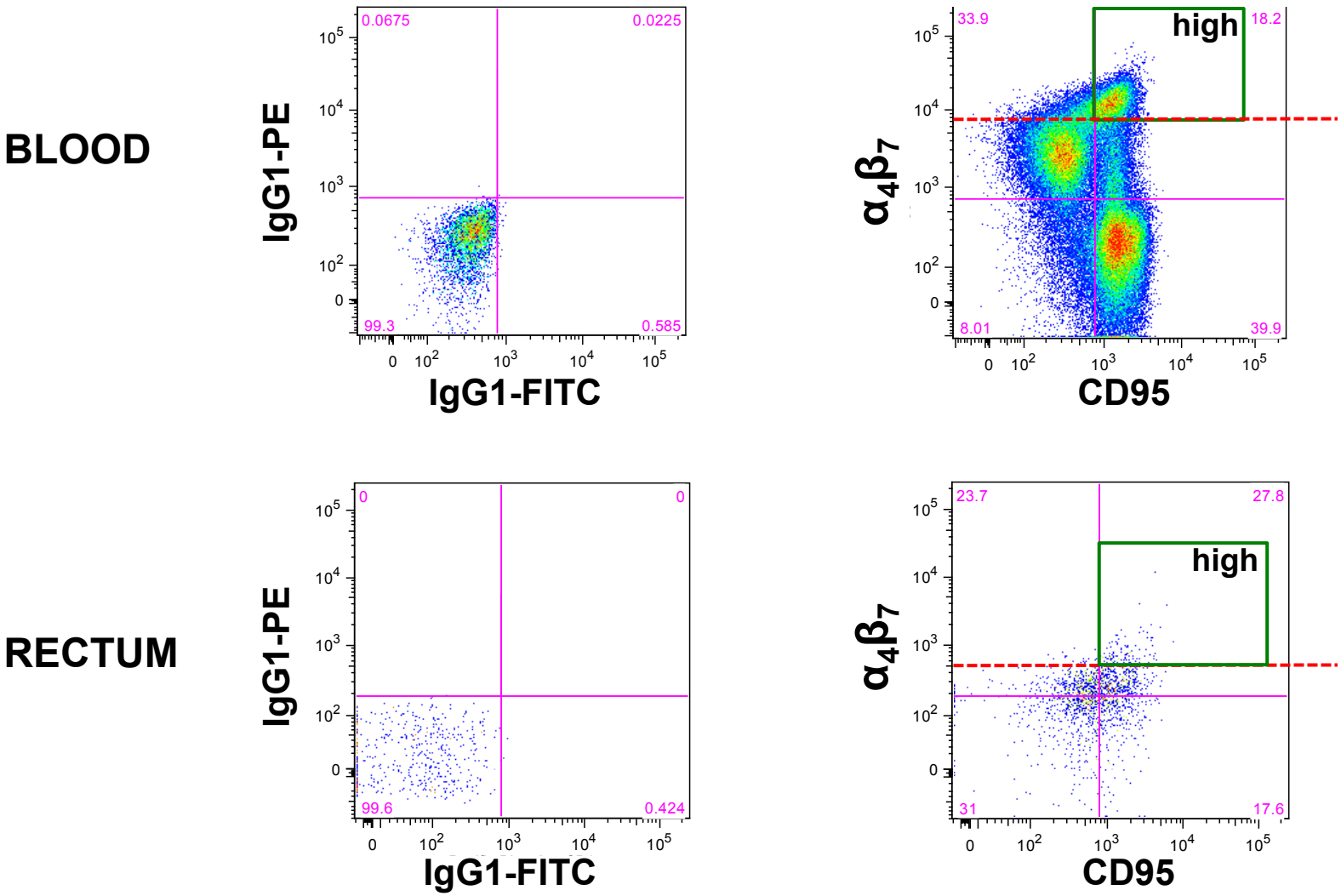
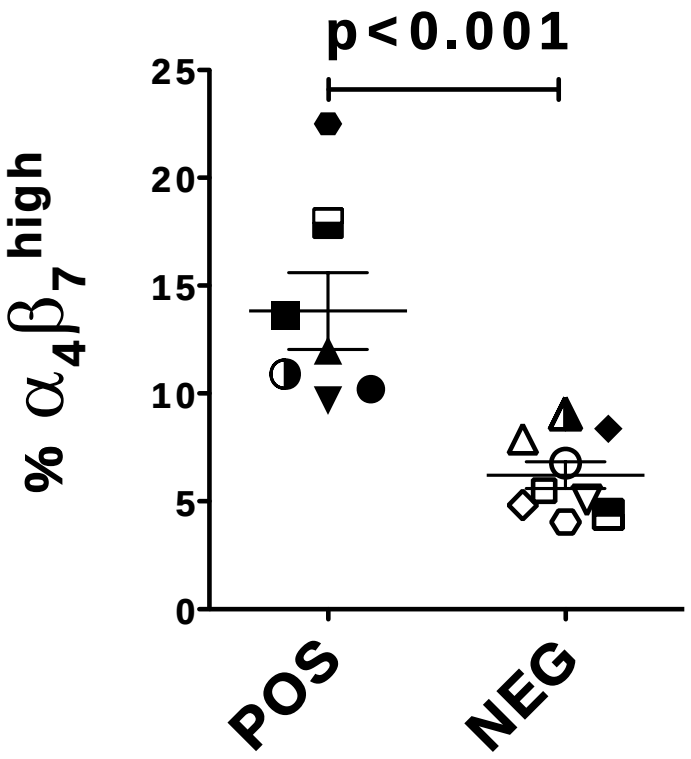
Supplemental Figure 1



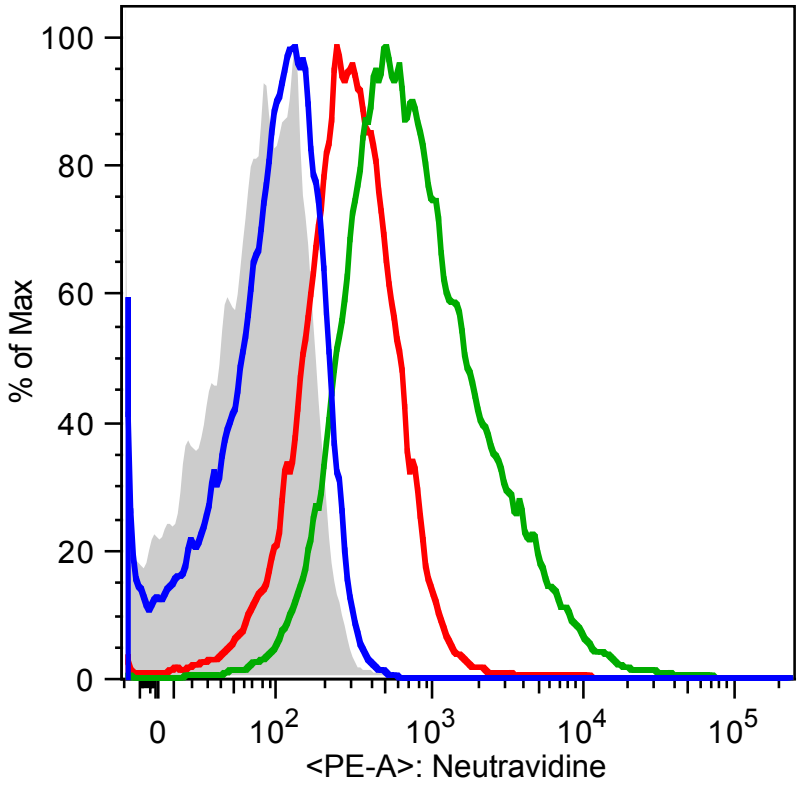
Gating strategy of $\alpha_4\beta_7^{high}$ cells within CD95⁺ CD4⁺ CD3⁺ T cells. CD3⁺ CD4⁺ cells are gated within all live (Aqua negative). Within this gate the fraction of CD95⁺ cells that are $\alpha_4\beta_7^{high}$ (green box – cut off at the top level of $\alpha_4\beta_7^{+}$ naïve cells) represents our population of interest ($\alpha_4\beta_7^{high}$ CD95⁺/ all CD95⁺) x 100. The same gating strategy was used for blood, rectum and lymph nodes.

Supplemental Figure 2



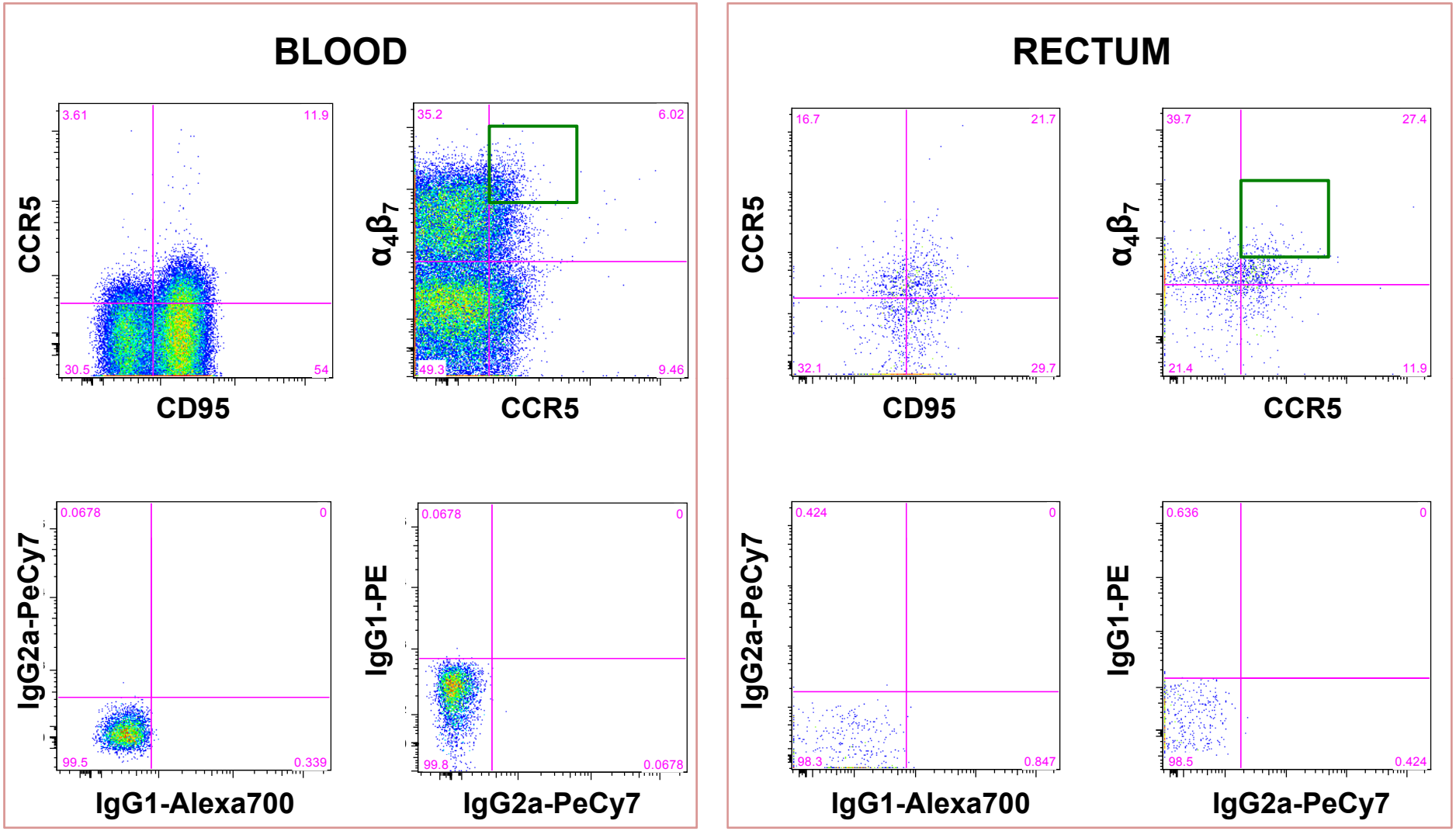
Higher frequency of blood $\alpha_4\beta_7^{high}$ $CD4^+$ T cells at the time of challenge in animals SIV positive 7 days post-challenge. The frequency of $\alpha_4\beta_7^{high}$ within $CD95^+$ $CD4^+$ $CD3^+$ T cells at time of challenge of animals that resulted positive (POS) or negative (NEG) by SIV-RNA PCR on plasma 7 days post challenge is shown. Data on the frequency of $\alpha_4\beta_7^{high}$ cells at the time of challenge is not available for 1 animal (FP29). Error bars represent means +/- SEM. The shown p value (significance $p<0.05$) was calculated with the non-parametric Mann-Whitney test.

Supplemental Figure 3



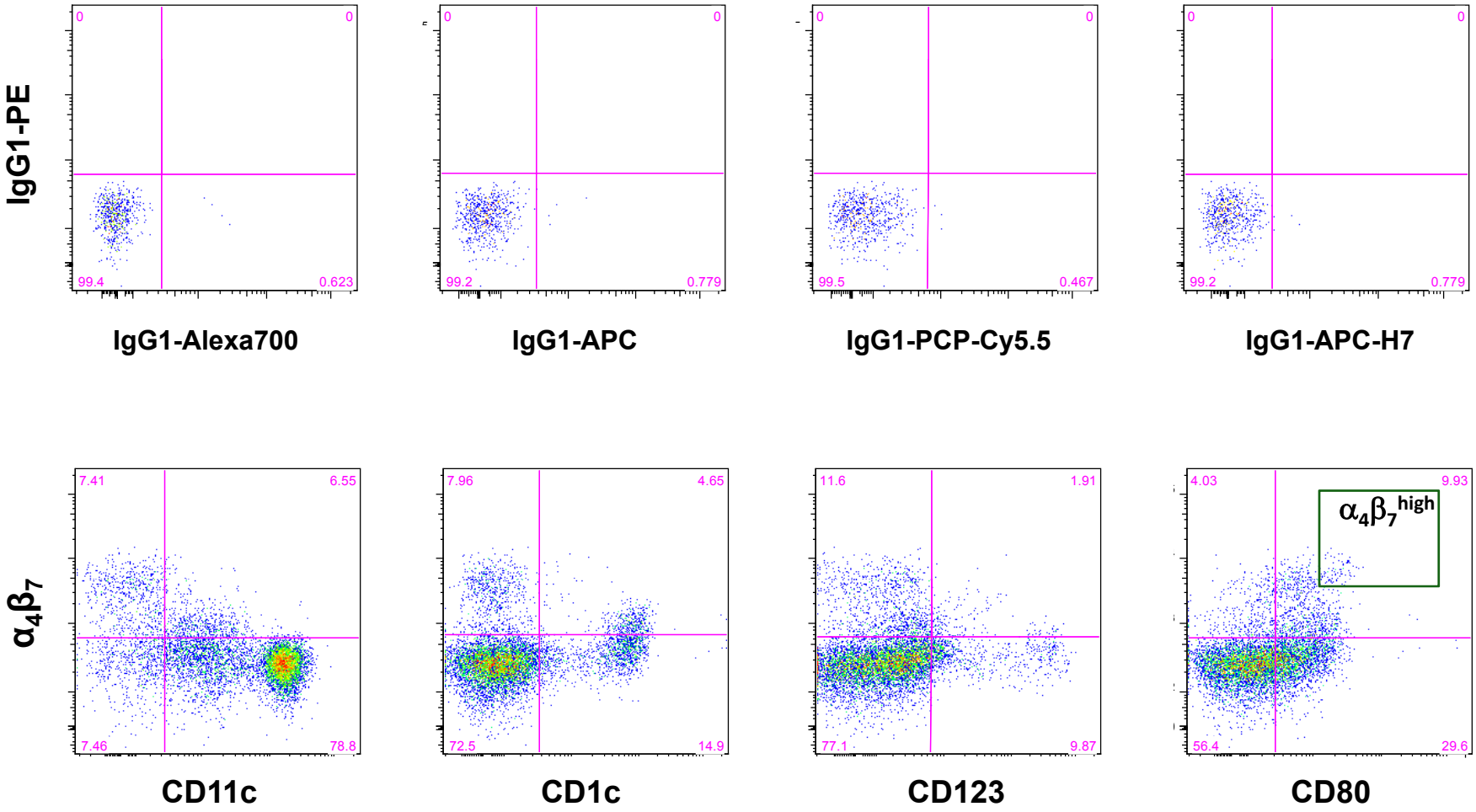
The gp120 of SIV_{mac239} binds $\alpha_4\beta_7$. Rhesus macaque $CD4^+$ T cells were cultured in RPMI 10% FBS containing 10nM of retinoic acid for 7 days to increase their expression of $\alpha_4\beta_7$, then incubated with biotinlated recombinant SIV_{mac239}gp120 in presence (red line) vs absence (green line) of a blocking anti-CD4 mAb (Leu3a) alone or together with an anti-α_4 known to block the interaction between gp120 and $\alpha_4\beta_7$ (2B4; blue line). Neutravidine-PE was used to detect the bound gp120 by flow cytometry (dead cells were excluded by staining with LIVE/DEAD Fixable Aqua (Invitrogen). The grey histogram shows the Neutravidine-PE control. One representative of at least 3 similar experiments is shown.

Supplemental Figure 4



Gating strategy of CCR5⁺ T cells. CD3⁺ CD4⁺ cells were gated within all live (Aqua negative). Within this gate we examined the frequency of all CCR5⁺, of CD95⁺ that are CCR5⁺, of $\alpha_4\beta_7^+$ CCR5⁺ and of $\alpha_4\beta_7^{high}$ CCR5⁺ (green boxes; cut-off based on the a4b7high cut-off in Suppl Fig1) in blood and rectal tissue.

Supplemental Figure 5



Gating strategies to identify $\alpha_4\beta_7^+$ DC subsets. Lin$^-$ HLA-DR$^+$ cells were gated within all live (Aqua negative) PBMCs. Within this gate the CD11c$^+$, CD1c$^+$ and CD123$^+$ pDCs are shown. In the farthest right panel we draw a green box around a population of cells that express very high levels of both $\alpha_4\beta_7$ and CD80. We highlighted this population because it is distinct from other $\alpha_4\beta_7^+$ CD80$^+$ DCs and it is present in all animals. We called this population $\alpha_4\beta_7^{high}$ CD80$^+$ cells. Further studies will be needed to characterize the population further.