

Supplemental information

Anti-viral efficacy of a next-generation

CD4-binding site bNAb in SHIV-infected animals

in the absence of anti-drug antibody responses

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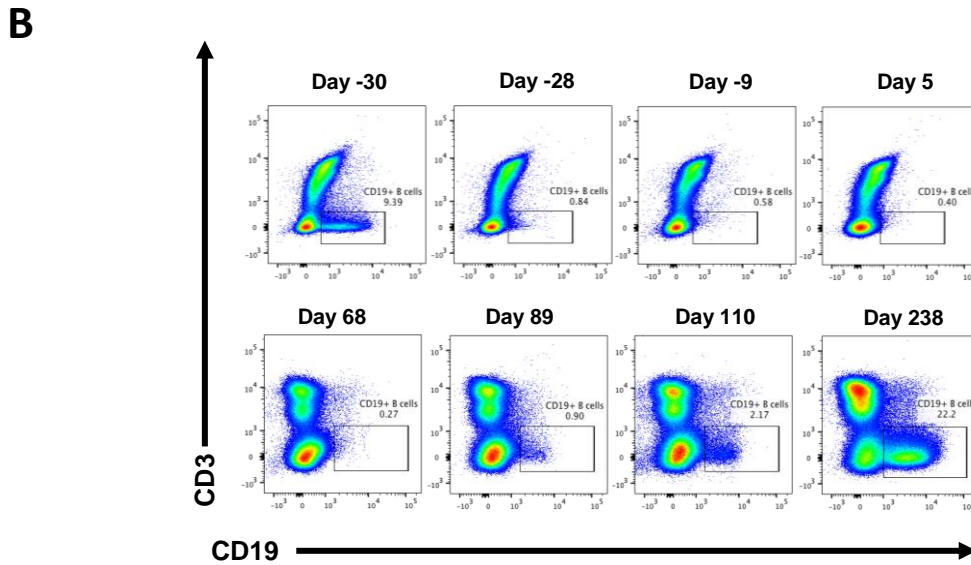
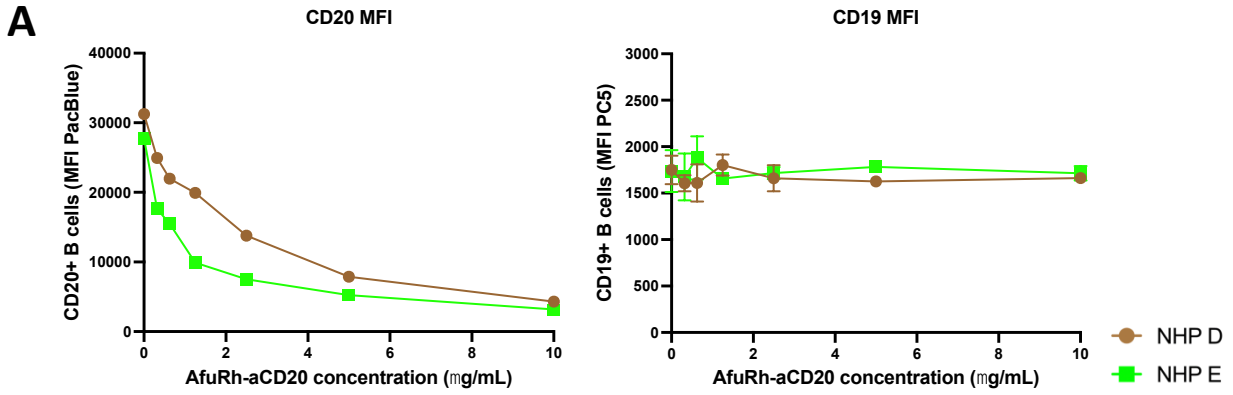


Figure S1. Anti-CD20 binding competition in naïve rhesus PBMCs and verification of B cell depletion in study by PBMC staining for B cell marker CD19, related to Figure 1. (A) Mean fluorescence intensity (MFI) of CD20 and CD19 signal in flow cytometry of SHIV-naïve rhesus PBMCs incubated on ice with varying concentrations of afucosylated rhesusized anti-CD20 (AfuRh-aCD20). (B) Representative flow cytometry plots of PBMC CD19⁺ B cells to verify depletion and recovery seen with CD20⁺ and/or CD19⁺ cells in whole blood analysis.

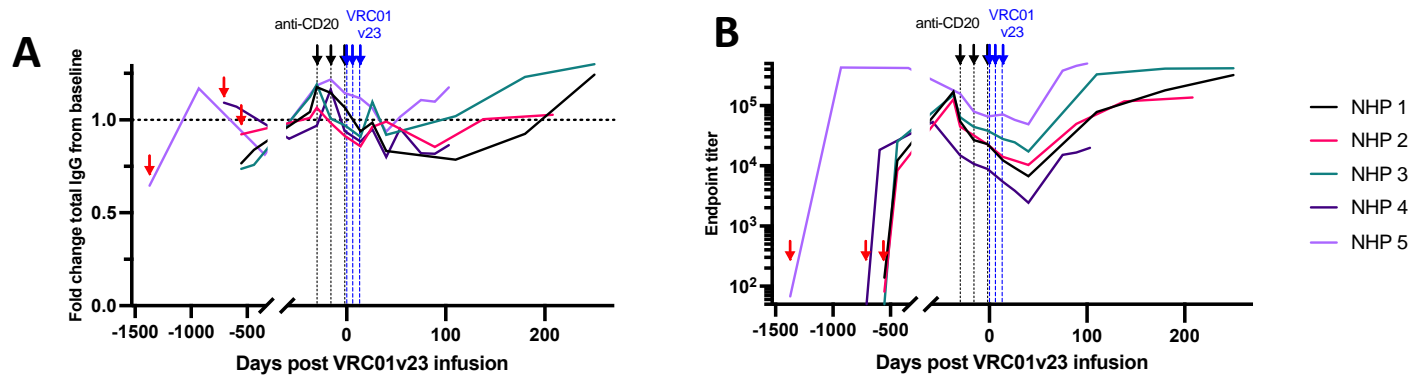


Figure S2. Total monkey IgG levels and anti-Env titers in animals treated with anti-CD20 and VRC01v23, related to Figure 1. (A) Total monkey IgG levels shown as fold change from pre-B cell depletion baseline average (red arrows = SHIV_{BG505} challenge, black arrows/dotted lines = anti-CD20 infusions, blue arrows/dashed lines = VRC01v23 infusions). (B) Anti-BG505 Env trimer ELISA endpoint titers from time of SHIV_{BG505} challenge through B cell depletion and recovery.

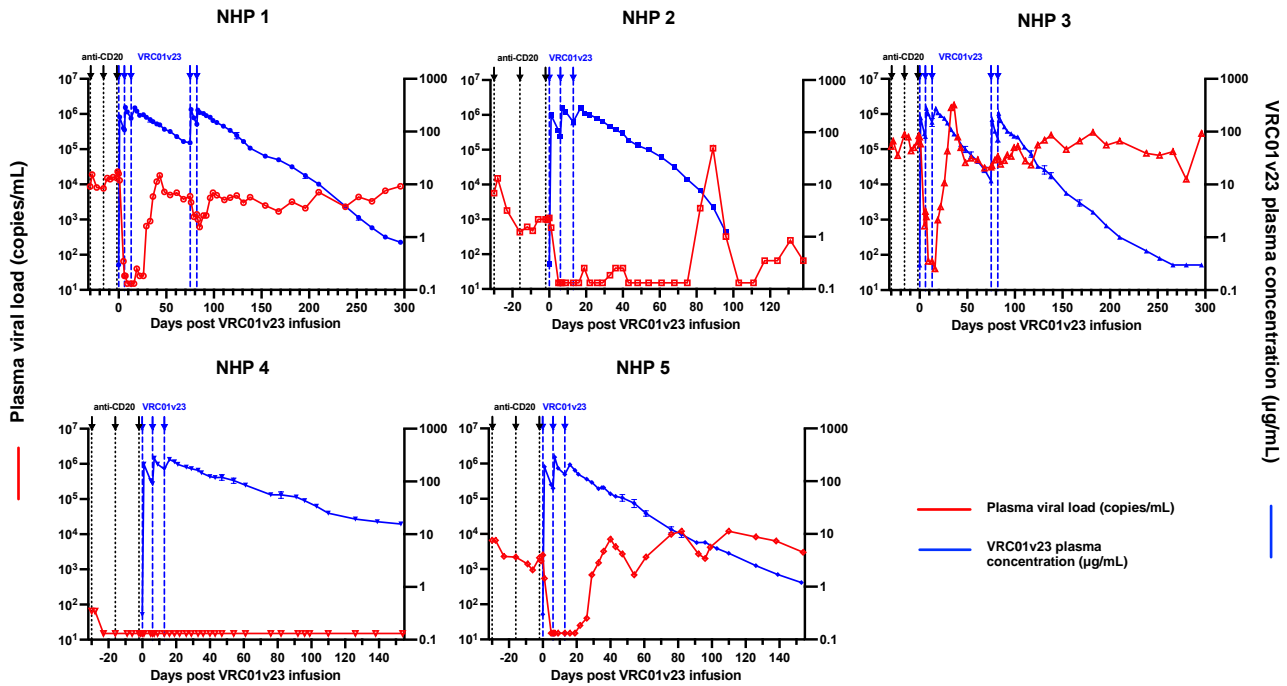


Figure S3. Extended plasma viremia and plasma levels of VRC01v23 in all depleted animals, related to Figure 2. Extended PK of VRC01v23 (blue, solid shapes) represented by plasma concentration of the bNAb through the last time of measurement, up to 296 days following the first bNAb infusion. Extended plasma viral loads (red, hollow shapes) of each animal respectively shown for evaluation of VRC01v23 from beginning of CD20 depletion through the last time of measurement. Each point in the PK curves represent the mean of at least two replicates and the error bar represents the standard error.

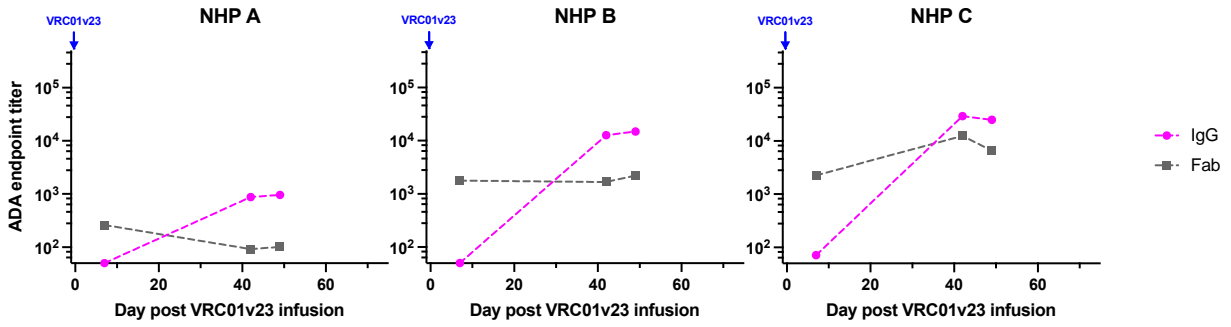


Figure S4. Analysis of anti-drug antibody responses in non-CD20 depleted animals administered a single 10 mg/kg dose of VRC01v23, related to Figure 3. ADA endpoint titers (dashed lines) directed toward the VRC01v23 whole IgG (circles, magenta) or Fab (squares, gray) after one 10 mg/kg IV infusion of VRC01v23 in naïve animals which did not receive anti-CD20.