



**Supplemental 1. B cell depletion following anti-CD20 treatment in hemophilia A mice.** Mice were treated with i.v. injection of *FVIII* plasmid (50 µg at day 0) and anti-CD20 or IgG2a isotype control at a dose of 250 µg/injection at days 0 and 14. PBMCs and spleen cells isolated from anti-CD20 treated hemophilia A mice were stained with FITC-CD19, and APC-B220 at 0.5, 2, 4, 8, 12, and 16 weeks following plasmid treatment and analyzed by flow cytometry. Naïve and IgG control-treated hemophilia A mice were used as controls. (A) Representative plot for blood cells at different time points, (B) Total B cell (CD19+B220+) depletion in blood over time, (C) Total B cell (CD19+B220+) depletion in spleen over time. Data shown is representative of two independent experiments.

**Supplemental. 1**