Supplementary Information for:

Bispecific Antibody Affords Complete Post-Exposure Protection of Mice from

Both Ebola (Zaire) and Sudan Viruses

Julia C. Frei, 1* Elisabeth K. Nyakatura, 1* Samantha E. Zak, 2* Russell R. Bakken, 2 Kartik Chandran, 3

John M. Dye,² and Jonathan R. Lai¹

¹ Department of Biochemistry, Albert Einstein College of Medicine, 1300 Morris Park Ave., Bronx,

NY 10461. ² Virology Division, United States Army Medical Research Institute of Infectious Disease,

1425 Porter Street, Fort Detrick, MD 21702. ³ Department of Microbiology and Immunology, Albert

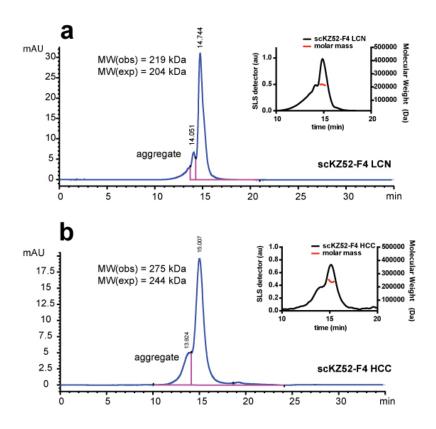
Einstein College of Medicine, 1300 Morris Park Ave., Bronx, NY 10461.

* These authors contributed equally to this work.

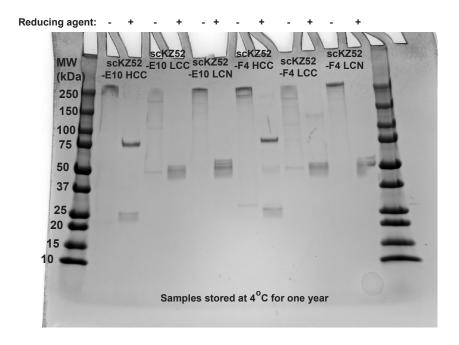
Correspondence and requests for materials should be addressed to J. M. D.

(john.m.dye1.civ@mail.mil) or J. R. L. (jon.lai@einstein.yu.edu)

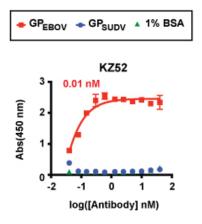
S1



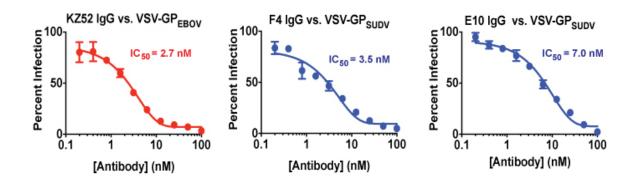
Supplementary Figure 1. Size exclusion chromatography-multiangle light scattering (SEC-MALS) analysis of Bis-mAbs. scKZ52-F4 LCN (a) and scKZ52-F4 HCC (b) were analyzed on an Agilent BioSec 5 in 150 mM HEPES buffer, pH 7.4, 200 mM NaCl. Absorbance was monitored at 280 nm. Molecular weight estimates from MALS shown in inset.



Supplementary Figure 2. SDS-PAGE analysis of Bis-mAbs after storage at 4 °C for one year.



Supplementary Figure 3. ELISA of KZ52 IgG for GP and 1% BSA control.



Supplementary Figure 4. Neutralization of VSV-GP by monospecific mAbs KZ52 (EBOV), F4 and E10 (SUDV)

Supplementary Table 1. Single-phase bioloayer interferometry (BLI) analysis of scKZ52-F4.

Analyte	$k_a (M^{-1} sec^{-1})$	$k_d (sec^{-1})$	$K_{D}(nM)$
GP_{EBOV}	$(3.7 \pm 0.1) \times 10^3$	$(8.7 \pm 0.3) \times 10^{-4}$	240 ± 8
GP_{SUDV}	$(6.4 \pm 0.1) \times 10^4$	$(1.1 \pm 0.01) \times 10^{-2}$	170 ± 3