Supplementary Figure Legends

Supplementary Figure S1. Protective efficacy of B10 in mice. Groups of Balb/c mice (N=5/group) received a single infusion of 6.25, 3.12, 1.56, 0.78, 0.39, 0.19, 0.097, 0.048, and 0 μg B10 and were subsequently challenged by the i.v. route with 10^5 VP (10^2 PFU). Serum viral loads are shown on days 0, 1, 2, 3, 4, and 7. Assay sensitivity 100 copies/ml. Mouse studies were performed twice.

Supplementary Figure S2. Viral loads in colorectal mucosa following ZIKV infection. Rhesus monkeys (N=4/group) received 10 mg/kg B10 or the isotype matched sham control antibody PGT121 by the i.v. route on day -1 or day +2 as shown in Figure 2. All animals were challenged on day 0 by the s.c route with 10^6 VP (10^3 PFU) ZIKV-BR. Viral loads are shown in colorectal biopsies on days 0, 3, 7, and 14. Assay sensitivity 100 copies/ml or $1x10^6$ cells. Arrows designate the day +2 infusions.

Supplementary Figure S3. Cellular immune responses. IFN-γ ELISPOT assays using Env, NS1, Cap, and prM peptide pools were performed in rhesus monkeys at week 2 following ZIKV challenge. Spot-forming cells (SFC) per 10^6 PBMC are shown for each sample as the mean of n=3 biologically independent assays. The red bars indicate median responses for each group of animals.

Supplementary Figure S4. Sequence of prM-Env in CSF virus from monkey 12-083. Identical sequences of prM-Env from the ZIKV-BR challenge stock and the day 14 CSF

virus (monkey 12-083) are shown. A single amino acid mutation (shown in red) was observed for both sequences compared with the Brazil ZKV2015 sequence (Genbank KU497555.1). Blue indicates region not sequenced.

Supplementary Figure S5. In vitro selection of ZIKV with B10 and C8. We performed 10 passages of three ZIKV strains (PF13, PE243, HD78788) with escalating concentrations of B10 or C8 antibodies, at 0.002, 0.015, and 0.070 μg/ml (corresponding to FRNT50, FRNT90, and FRNT99) for 2, 3, and 5 passages, respectively. Virus neutralization assays were then performed to determine the resistance of parental vs. B10/C8-selected passaged ZIKV viruses to neutralization. Data are representative of n=3 biologically independent experiments, and mean ± SEM values are shown. ZIKV Env sequences of parental and B10/C8-selected passaged virus were also determined.

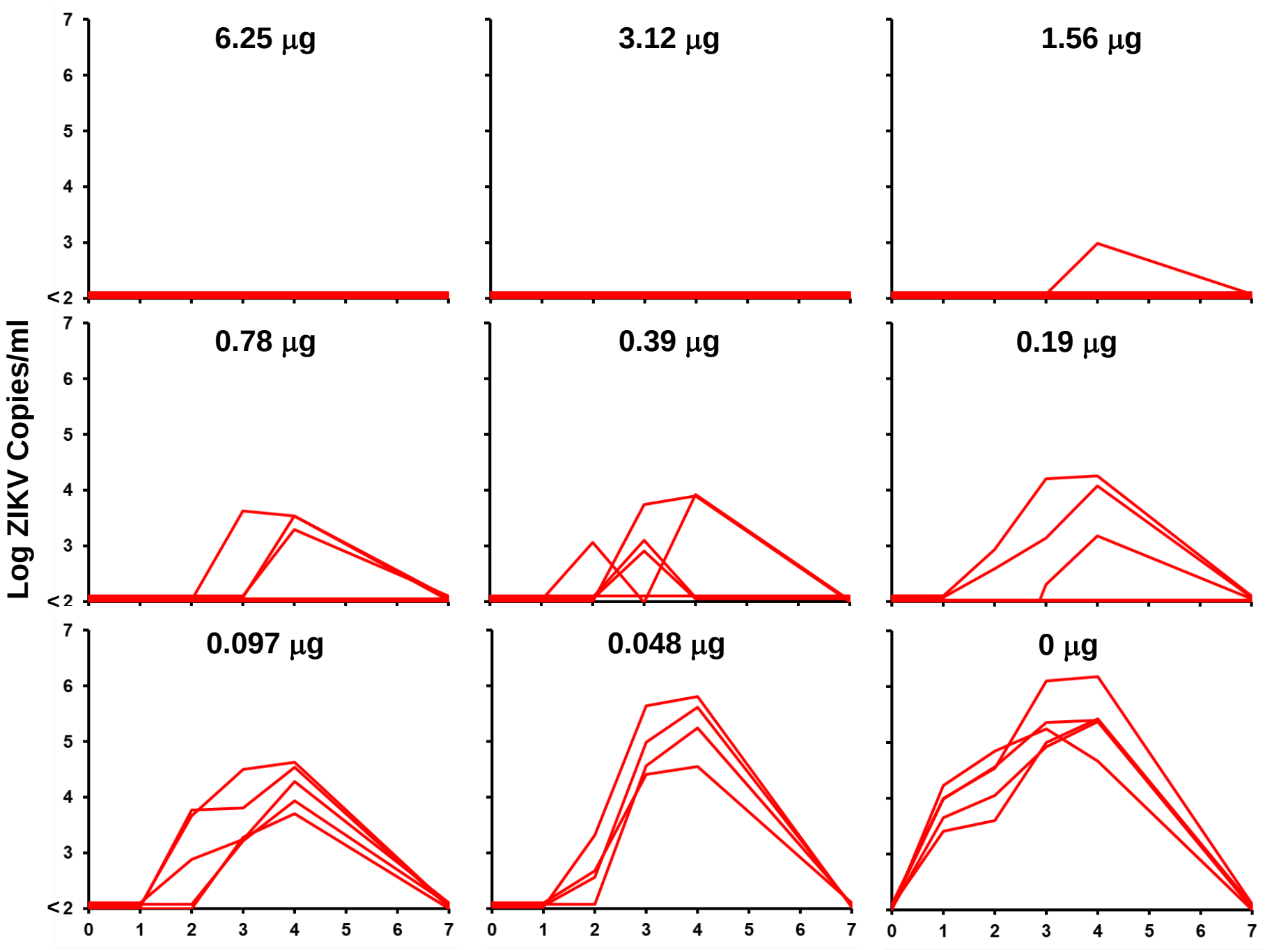

6.25 µg
3.12 µg
1.56 µg
0.78 µg
0.39 µg
0.19 µg
0.097 µg
0.048 µg
0 µg
Log ZIKV Copies/ml
< 2
2
3
4
5
6
7
0
1
2
3
4
5
6
7
Days Following Challenge

Figure S1

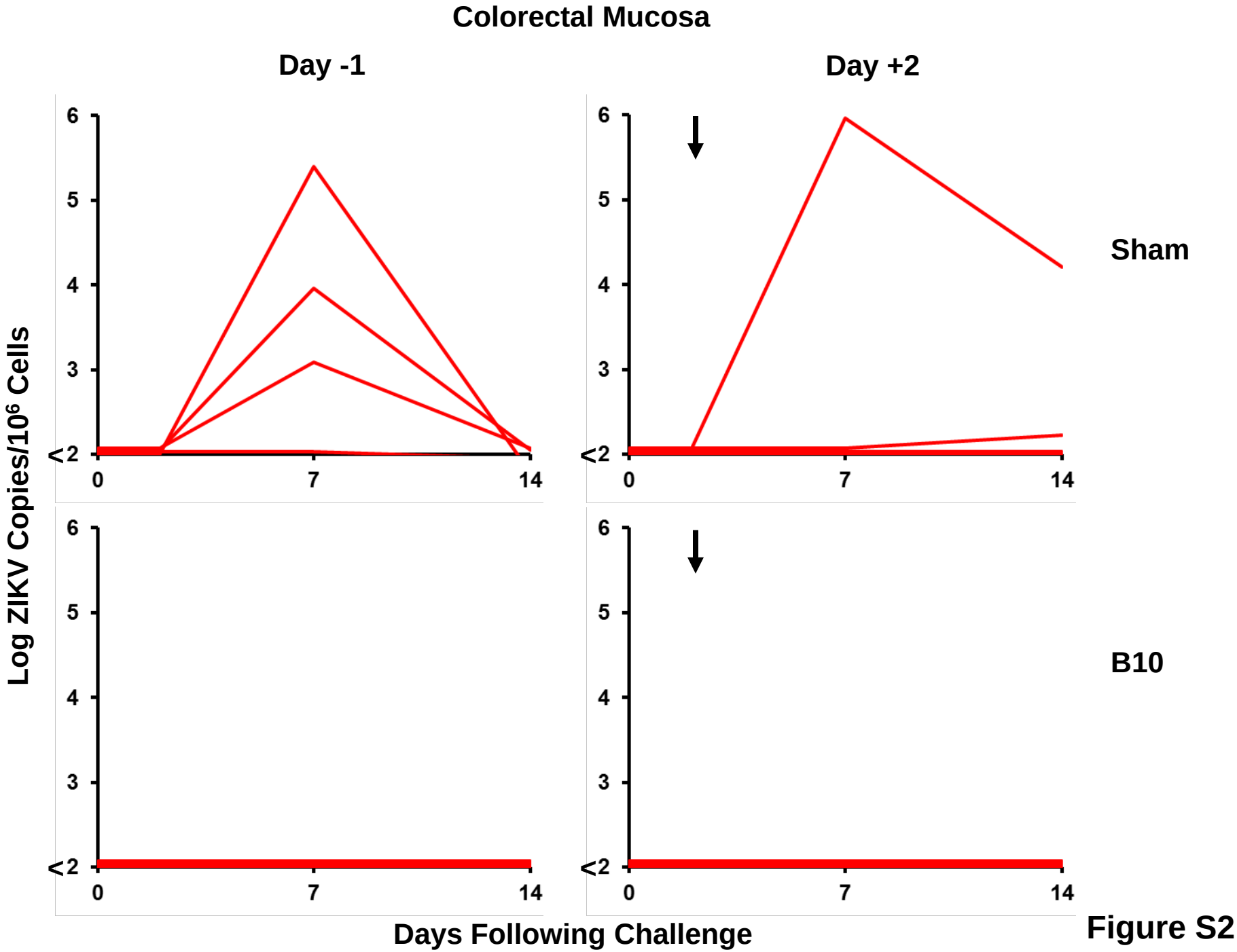

Colorectal Mucosa
Day -1
Day +2
Sham
B10
Log ZIKV Copies/10^6 Cells
Days Following Challenge
6
5
4
3
2
0
7
14

Figure S2

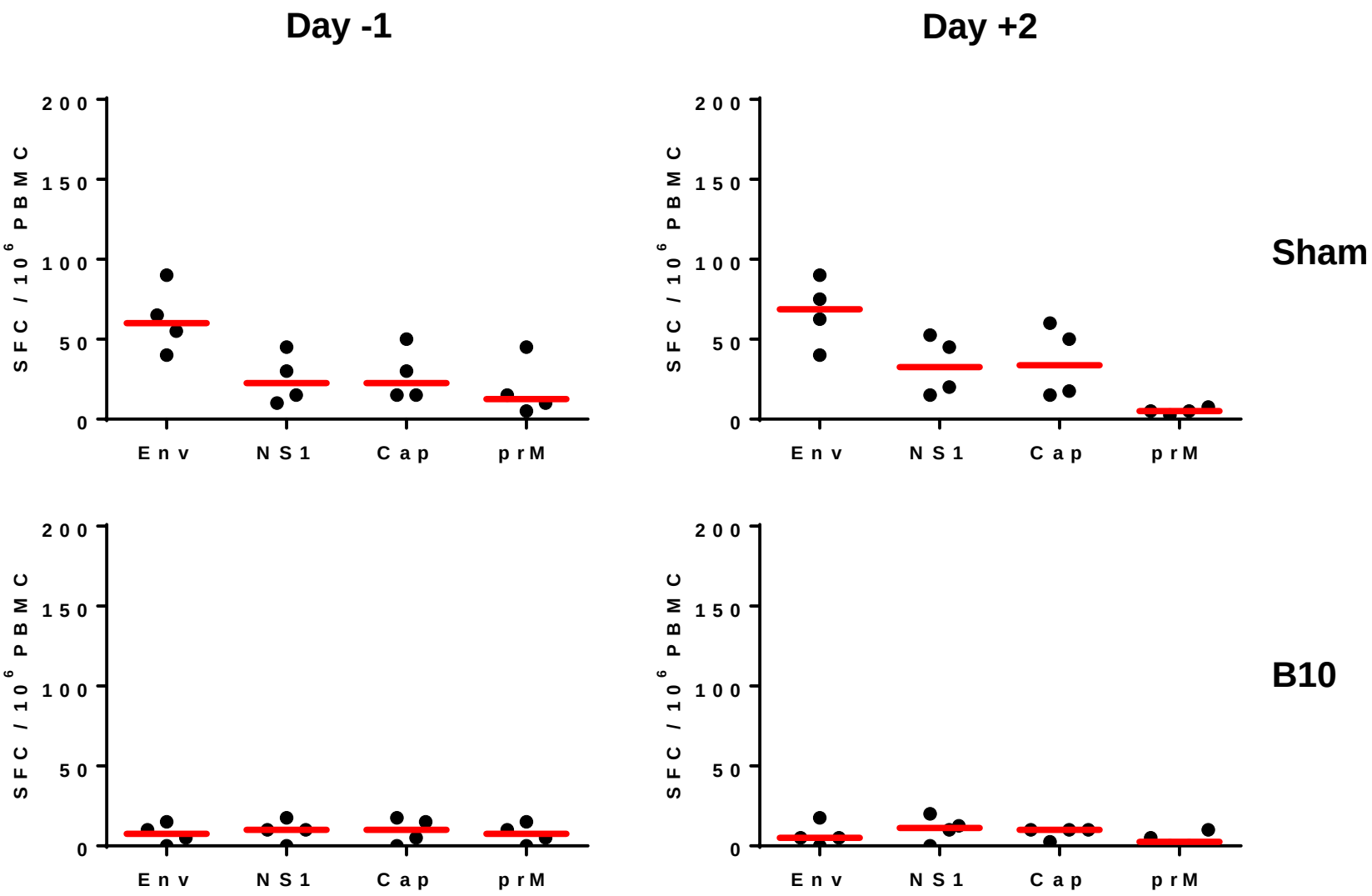


Figure S3

Brazil ZKV2015 prM-Env Sequence (Genbank KU497555.1)

AVTLPSHSTRKLQTRSQTWLESREYTKHLIRVENWIFRNPGFALAAAAIAWLLGSSTSQKVIYLVMILLIAPAYSIRCIGVSN
RDFVEGMSGGTWVDVVLEHGGCVTVMAQDKPTVDIELVTTTVSNMAEVRSYCYEASISDMASDSRCPTQGEAYLDKQSDTQYV
CKRTLVDRGWGNGCGLFGKGSLVTCAKFACSKKMTGKSIQPENLEYRIMLSVHGSQHSGMIVNDTGHETDENRAKVEITPNSP
RAEATLGGFGSLGLDCEPRTGLDFSDLYYLTMNNKHWLVHKEWFHDIPLPWHAGADTGTPHWNNKEALVEFKDAHAKRQTVVV
LGTQEGAVHTALAGALEAEMDGAKGRLSSGHLKCRLKMDKLRLKGVSYSLCTAAFTFTKIPAETLHGTVTVEVQYAGTDGPCK
VPAQMAVDMQTLTPVGRLITANPVITESTENSKMMLELDPPFGDSYIVIGVGEKKITHHWHRSGSTIGKAFEATVRGAKRMAV
LGDTAWDFGSVGGALNSLGKGIHQIFGAAFKSLFGGMSWFSQILIGTLLMWLGLNTKNGSISLMCLALGGVLIFLSTAVSA

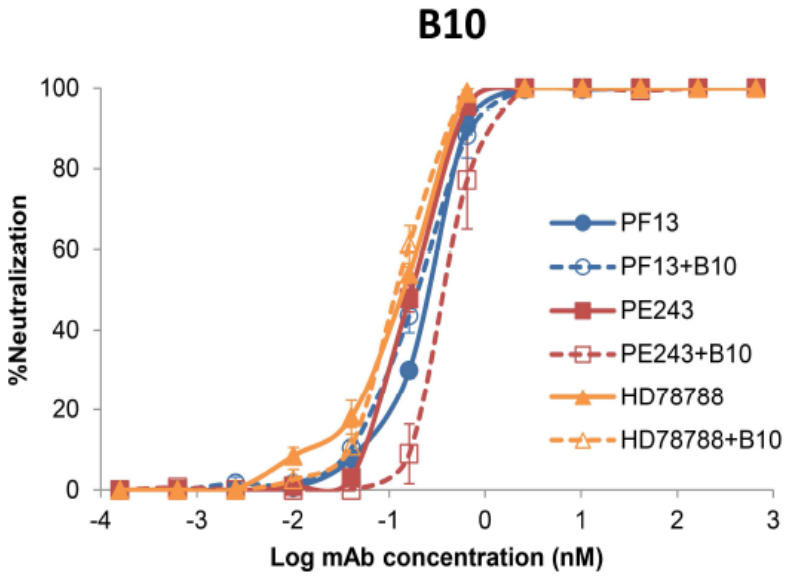
ZIKV-BR Challenge Stock prM-Env Sequence

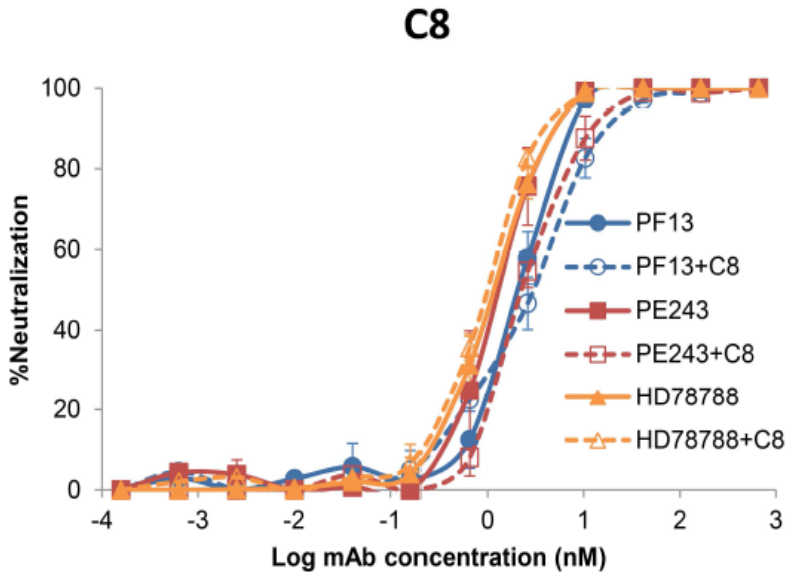
AVTLPSHSTRKLQTRSQTWLESREYTKHLIRVENWIFRNPGFALAAAAIAWLLGSSTSQKVIYLVMILLIAPAYSIRCIGVSN
RDFVEGMSGGTWVDVVLEHGGCVTVMAQDKPTVDIELVTTTVSNMAEVRSYCYEASISDMASDSRCPTQGEAYLDKQSDTQYV
CKRTLVDRGWGNGCGLFGKGSLVTCAKFACSKKMTGKSIQPENLEYRIMLSVHGSQHSGMIVNDTGHETDENRAKVEITPNSP
RAEATLGGFGSLGLDCEPRTGLDFSDLYYLTMNNKHWLVHKEWFHDIPLPWHAGADTGTPHWNNKEALVEFKDAHAKRQTVVV
LGSQEGAVHTALAGALEAEMDGAKGRLSSGHLKCRLKMDKLRLKGVSYSLCTAAFTFTKIPAETLHGTVTVEVQYAGTDGPCK
VPAQMAVDMQTLTPVGRLITANPVITESTENSKMMLELDPPFGDSYIVIGVGEKKITHHWHRSGSTIGKAFEATVRGAKRMAV
LGDTAWDFGSVGGALNSLGKGIHQIFGAAFKSLFGGMSWFSQILIGTLLMWLGLNTKNGSISLMCLALGGVLIFLSTAVSA

CSF Day 14 (Monkey 12-083) prM-Env Sequence

AVTLPSHSTRKLQTRSQTWLESREYTKHLIRVENWIFRNPGFALAAAAIAWLLGSSTSQKVIYLVMILLIAPAYSIRCIGVSN
RDFVEGMSGGTWVDVVLEHGGCVTVMAQDKPTVDIELVTTTVSNMAEVRSYCYEASISDMASDSRCPTQGEAYLDKQSDTQYV
CKRTLVDRGWGNGCGLFGKGSLVTCAKFACSKKMTGKSIQPENLEYRIMLSVHGSQHSGMIVNDTGHETDENRAKVEITPNSP
RAEATLGGFGSLGLDCEPRTGLDFSDLYYLTMNNKHWLVHKEWFHDIPLPWHAGADTGTPHWNNKEALVEFKDAHAKRQTVVV
LGSQEGAVHTALAGALEAEMDGAKGRLSSGHLKCRLKMDKLRLKGVSYSLCTAAFTFTKIPAETLHGTVTVEVQYAGTDGPCK
VPAQMAVDMQTLTPVGRLITANPVITESTENSKMMLELDPPFGDSYIVIGVGEKKITHHWHRSGSTIGKAFEATVRGAKRMAV
LGDTAWDFGSVGGALNSLGKGIHQIFGAAFKSLFGGMSWFSQILIGTLLMWLGLNTKNGSISLMCLALGGVLIFLSTAVSA

Figure S4





	Envelope sequences				
	PF13	PE243		HD78788	
ZIKV-mAb	L/M212M	H401Y	-	I/T156T	-
ZIKV+B10	L/M212L/M	-	K454R	I/T156T	A280V
ZIKV+C8	L/M212M	-	-	I/T156T	-

Figure S5