Figure S1

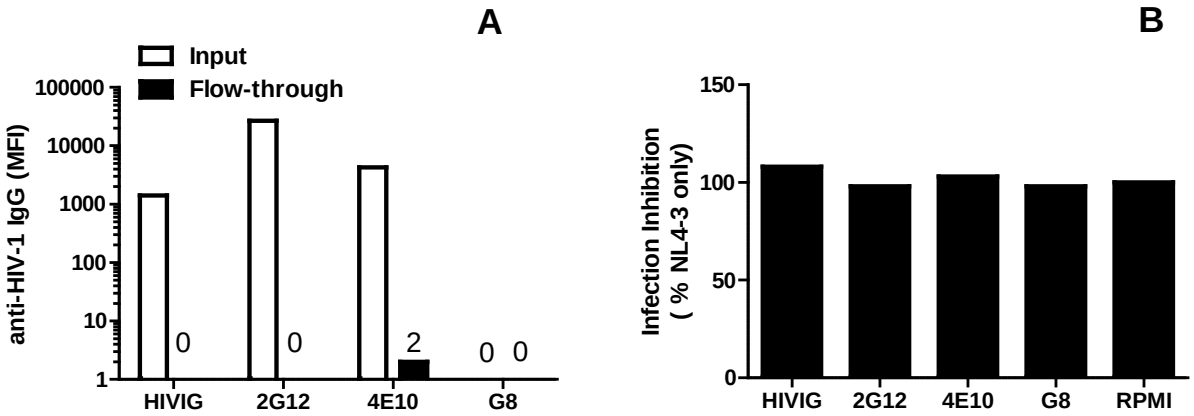

Figure S1. Controls for removal of HIV-1 specific IgG by Protein G column. 150µl of 10 µg/ml IgG or RPMI was absorbed by Protein G as the experiments in Figure 4. **A.** No detectable HIV-1 specific IgG in the flow-through after Protein G absorption. HIV-1 specific IgG in the flow-through fraction was measured by a HIV-1 multiplex binding assay (HIVIG, 2G12, and G8 against ConSgp140, 4E10 against HIV-1 Env gp41) after passing through the Protein G column. **B.** The flow-through of the 2G12 mAb after absorption by Protein G columns did not inhibit virus replication in a TZM-bl neutralization assay.

Figure S2

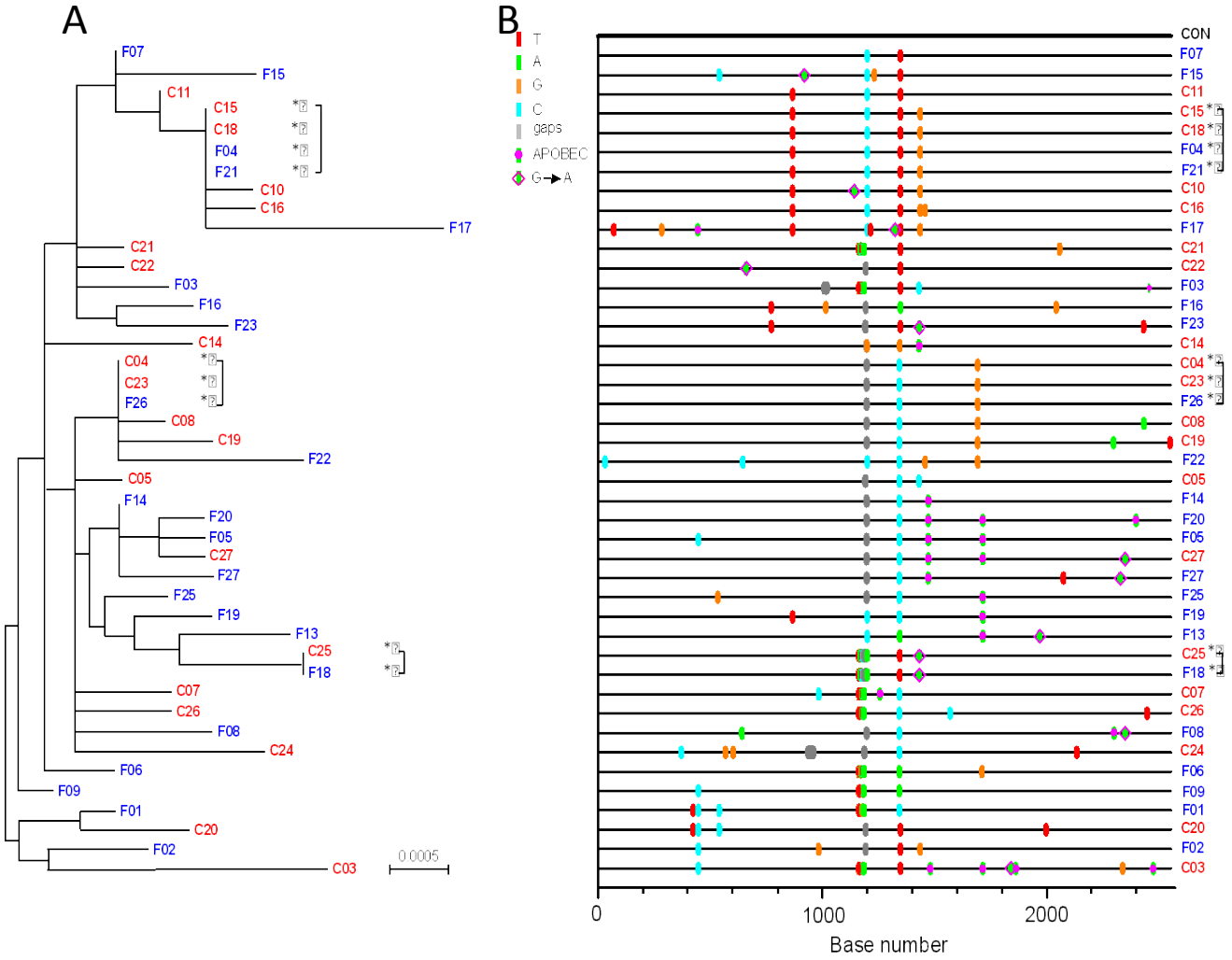

Figure S2. Analysis of complete *env* sequences from captured and uncaptured (flow-through) virions. The *env* sequences were obtained by SGA and analyzed using **A.** the Neighbor-Joining tree and **B.** Highlighter plot methods. The sequences from captured viruses are indicated by red color and those from flow-through viruses by blue color. Sequences identical to each other in each phylogenetic lineage are indicated by asterisks. The horizontal scale represents genetic distance.

Figure S3

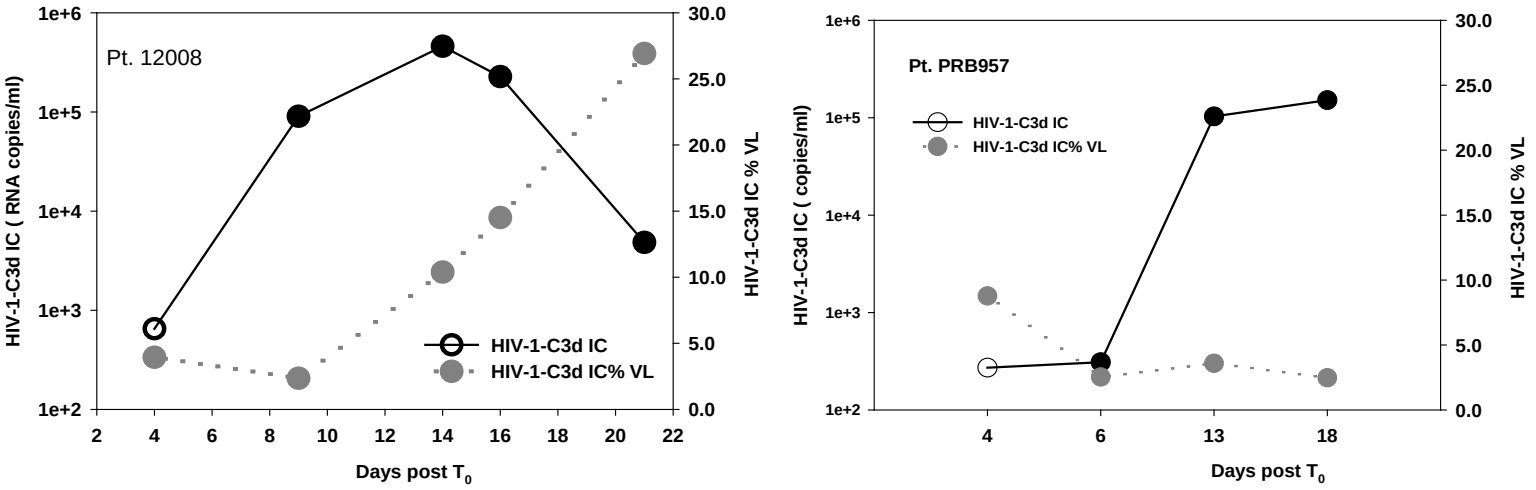

Figure S3. HIV-1-C3d IC were detectable in plasma from AHI. HIV-1-C3d IC in plasma were captured by mouse anti-C3d IgG coated microplate as described in (43). The captured C3d-virion IC were lysed and measured by viral RNA real time RT-PCR. The HIV-1 –C3d IC was presented as viral RNA copies/ml (Black circle). The percentage of the HIV-1-C3d IC to the total plasma viral load was calculated and shown here (gray circle). The results of 2 typical subjects were shown here.

Figure S4

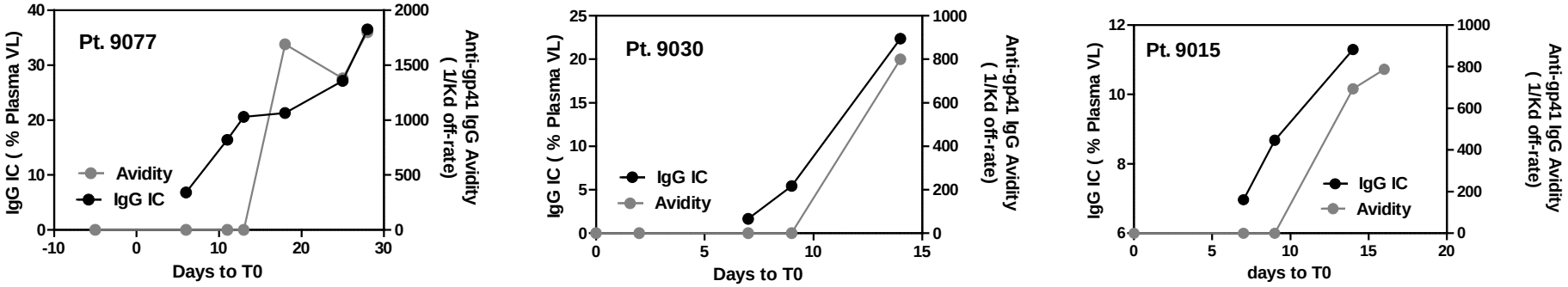

Figure S4. The endogenous IgG-virion IC plotted vs. the dissociation rates for anti-gp41 IgG in 3 additional AHI subjects.

Table S1

Cohort	Subjects ID	Captured Virions (RNA) (copies/ml)	Total Virions (RNA)* (copies/ml)	Peak of Endogenous IgG-virion IC (%)
Plasma Donor ZeptoMetrix N=13	9012	4554	11529	39.5
	9015	78000	690265	11.3
	9018	27775	143170	19.4
	9021	219250	504023	43.5
	9023	36480	388085	9.4
	9030	123000	549107	22.4
	9034	31660	245426	12.9
	9075	119800	469804	25.5
	9076	1819	2584	70.4
	9077	3216	8787	36.6
	12008	3232	35130	9.2
	6244	4299	102357	4.2
	6247	342	8143	4.2
Plasma Donor Seracare N=4	PRB939	687	1544	44.5
	PRB943	2725	38380	7.1
	PRB951	33275	350263	9.5
	PRB957	168750	1962209	8.6
Acute CHAVI 001 N=21	C1-0275	6760	75111	9.0
	C1-0427	1167	2785	41.9
	C1-0570	0	7043	0
	C1-0666	9360	95510	9.8
	C1-0709	1212	7528	16.1
	C1-0850	30040	236535	12.7
	C1-0358	79800	128090	62.3
	C1-0517	90800	132943	68.3
	C1-0149	1856	4052	45.8
	C1-0185	3868	17743	21.8
	C1-0047	8700	20519	42.4
	C1-0157	1112	5032	22.1
	C1-0736	4632	11847	39.1
	C1-0798	170400	230582	73.9
	C1-0455	55160	100109	55.1
	C1-0976	9400	17871	52.6
	C1-1023	8833	22138	39.9
	C1-1096	37120	74240	50.0
	C1-1215	19080	61154	31.2
	C1-0731	5236	16061	32.6
	C1-0010	32229	51649	62.4
Chronic CHAVI 001 N=10	C1-0586	19600	29297	66.9
	C1-0645	75720	128122	59.1
	C1-0237	940	2892	32.5
	C1-0060	407	651	62.5
	C1-0642	18520	26647	69.5
	C1-0588	19060	41435	46.0
	C1-0261	5526	8771	63.0
	C1-0300	2904	6785	42.8
	C1-0573	177	276	64.1
	C1-0598	2082	4090	50.9

Table S1. Summary of the peak of plasma endogenous IgG coated virion IC in 38 AHI and 10 chronic subjects.

*Total virions (RNA) = the viral RNA of the flow-through + the viral RNA of capture in Protein G capture assay

Table S2

Patient	$f = 1$ $K\ (l/mol)$	$f = 14$ $K\ (l/mol)$	$f = 35$ $K\ (l/mol)$
PRB951	7.9×10^5 $[0, 5.8 \times 10^6]$	5.4×10^4 $[0, 3.2 \times 10^5]$	2.2×10^4 $[0, 1.2 \times 10^5]$
PRB957	6.2×10^4 $[0, 4.6 \times 10^5]$	4.3×10^3 $[0, 2.5 \times 10^4]$	1.7×10^3 $[0, 9.8 \times 10^3]$
PRB939	4.2×10^4 $[1.9 \times 10^4, 8.4 \times 10^4]$	2.2×10^3 $[1.1 \times 10^3, 3.7 \times 10^3]$	8.8×10^2 $[4.7 \times 10^2, 1.4 \times 10^3]$
9030	5.2×10^6 $[2.4 \times 10^6, 8.8 \times 10^6]$	3.3×10^5 $[1.5 \times 10^5, 5.3 \times 10^5]$	1.3×10^5 $[6 \times 10^4, 2.1 \times 10^5]$
9075	3.7×10^4 $[7.7 \times 10^3, 8.6 \times 10^4]$	2.2×10^3 $[4.2 \times 10^2, 4.7 \times 10^3]$	8.9×10^2 $[1.6 \times 10^2, 1.9 \times 10^3]$
9012	4.7×10^6 $[2.7 \times 10^6, 7.8 \times 10^6]$	2.6×10^5 $[1.6 \times 10^5, 3.9 \times 10^5]$	1×10^5 $[6.4 \times 10^4, 1.5 \times 10^5]$
9034	3.1×10^6 $[0, 9.6 \times 10^6]$	2.1×10^5 $[0, 6.2 \times 10^5]$	8.5×10^4 $[0, 2.4 \times 10^5]$
12008	8×10^4 $[7.7 \times 10^3, 1.7 \times 10^5]$	5.4×10^3 $[5 \times 10^2, 1.1 \times 10^4]$	2.2×10^3 $[2 \times 10^2, 4.3 \times 10^3]$

Table S2. The estimated affinity constant K for each patient given a model assuming either univalent (f=1) or multivalent binding with f=14 or f=35 maximal number of possible binding sites. Numbers in brackets represent 95% confidence intervals of the estimates.