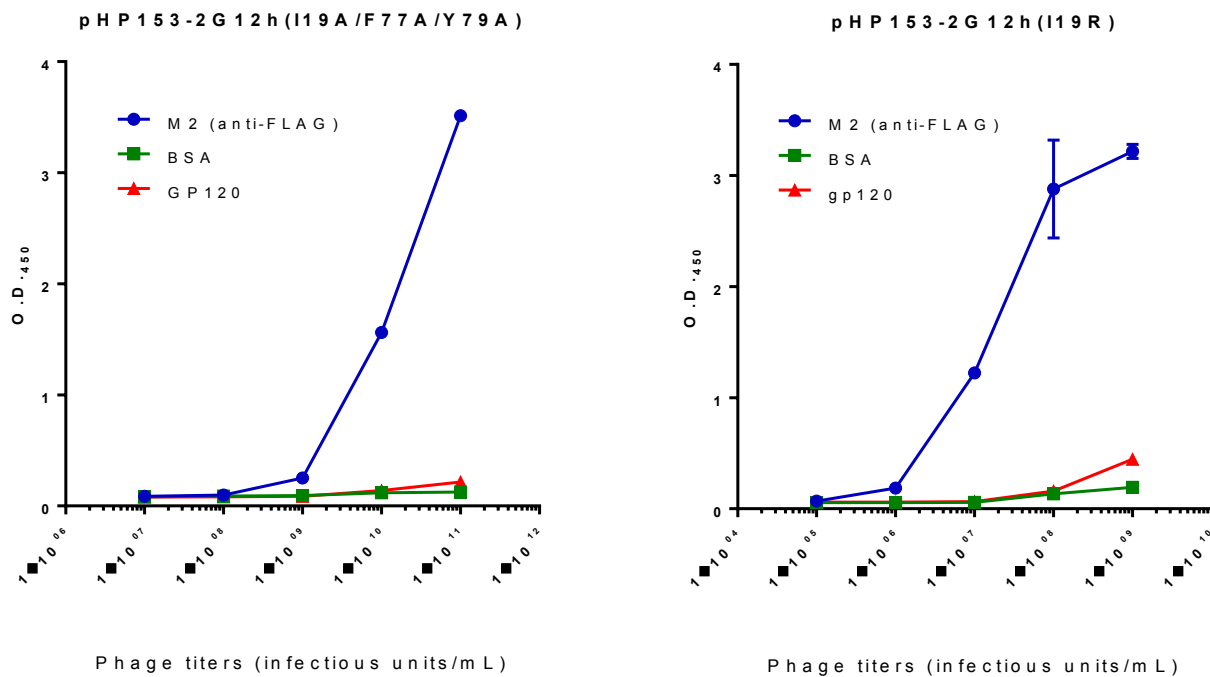


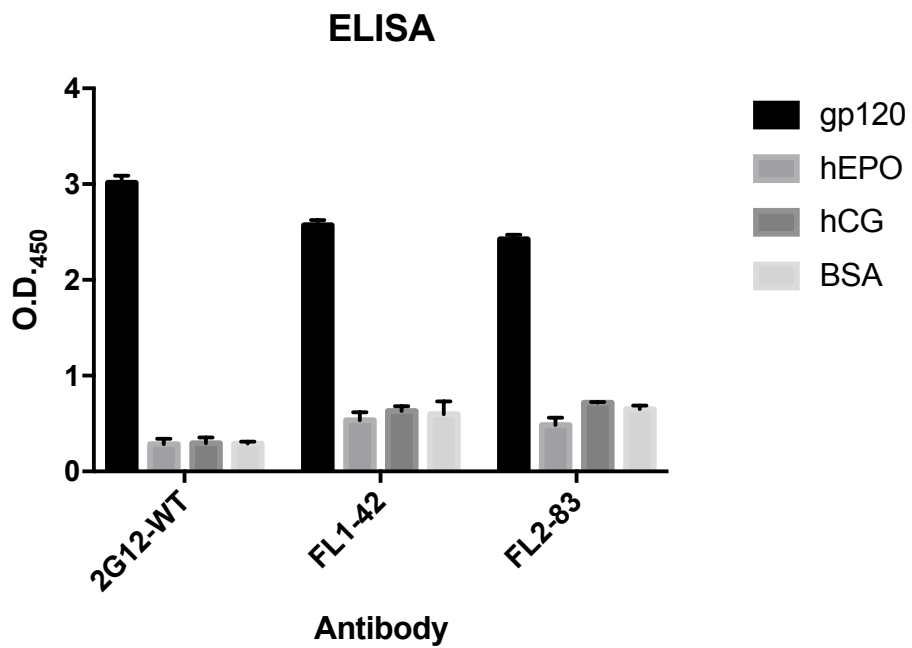
Supporting Information for “Interrogation of Side Chain Biases for Oligomannose Recognition in Antibody 2G12 via Structure-Guided Phage Display Libraries”

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Supplementary Figure 1: Phage ELISA of pHP153-2G12h(I19A/F77A/Y79A) and pHP153-2G12h(I19R).



Supplementary Figure 2: ELISA of 2G12, FL1-42 and FL2-83 for binding to gp120, BSA, hEPO, and hCG. Antibody concentrations were $\sim 7 \mu\text{M}$ for FL1-42 and FL2-83, and $\sim 0.1 \mu\text{M}$ for 2G12.

Supplementary Table 1 (next page): Glycan mAbs used for contact analysis.

Antibody name	Antigen target	Antigen class	PDB ID	reference
2G12	Man9GlcNAc2	HIV-1 glycoprotein	1OP5	(Calarese et al. 2003)
PGT128	V3 domain of GP120	HIV-1 glycoprotein	3TYG	(Pejchal et al. 2011)
PG9	V1/V2 domain of GP120	HIV-1 glycoprotein	3U4E	(McLellan et al. 2011)
PG16	V1/V2 domain of GP120	HIV-1 glycoprotein	4DQO	(Pancera et al. 2013)
PGT121	Self N-glycan	HIV-1 glycoprotein	4FQC	(Mouquet et al. 2012)
PGT135	GP120 core	HIV-1 glycoprotein	4JM2	(Kong et al. 2013)
SYA J-6	Rha α 1,2Rha α 1,3Rha α 1,3GlcNAc α 1,2Rao	Internal epitopes of bacterial LPS	1M7I	(Vyas et al. 2002)
Se155-4	Abe α 1,3Mana α 1,4Rha α 1,3Gal	Internal epitopes of bacterial LPS	1MFC	(Cygler et al. 1993)
F22-4	\rightarrow 2Rha α 1,2Rha α 1,3(Glc α 1,4)Rha α 1,3GlcNAc β 1 \rightarrow	Internal epitopes of bacterial LPS	3BZ4	(Vulliez-Le Normand et al. 2008)
WN1 222-5	GlcNAc1,2Glc α 1,2Glc α 1,3(Gal α 1,6)Glc α 1,3(Hep α 1,7)(P4)Hep α 1,3(P4)Hep α 1,5(Kdo α 2,4)Kdo α 2,6(P4)GlcN β 1,6GlcNAc(1P)	Internal epitopes of bacterial LPS	3V0W	(Gomery et al. 2012)
LPT3-1	GlcNAc α 1,2Hep α 1,3(Glc β 1,4)Hep α 1,5Kdo	Internal epitopes of bacterial LPS	4C83	(Parker et al. 2014)
L363	Mouse CD1d receptor and C20:2 α Gal ceramide	Sialic acid (glycolipid)	3UBX	(Yu et al. 2012)
mAb735	α 2,8NeuAc (sialic acid) octamer	Sialic acid (homopolysaccharide epitopes)	3WBD	(Nagae et al. 2013)
CS-35	Ara β 1,2Ara α 1,5(Ara β 1,2Ara α 1,3)Ara α 1,5Ara α	Terminal bacterial epitopes	3HNS	(Murase et al. 2009)
S73-2	Kdo2,8Kdo2,4Kdo	Terminal bacterial epitopes	3HZV	(Brooks, Muller-Loennies, et al. 2010)
S54-10	Kdo2,4Kdo2,4Kdo	Terminal bacterial epitopes	3I02	(Brooks, Muller-Loennies, et al. 2010)
S67-27	Kdo2,8-7-O-Me-Kdo	Terminal bacterial epitopes	3IKC	(Brooks, Blackler, et al. 2010)
S64-4	Kdo2,8Kdo2,4Kdo2,6GlcN4P1,6GlcN1P	Terminal bacterial epitopes	3PHO	(Evans et al. 2011)
S25-2	Kdo	Terminal bacterial epitopes	3T4Y	(Nguyen et al. 2003)
S25-26	Kdo2,8Kdo2,4Kdo-O-allyl	Terminal bacterial epitopes	4M7J	(Haji-Ghassemi et al. 2014)
chBR96	Fuc α 1,2Gal β 1,4(Fuc α 1,3)GlcNAc β 1,3Gal (Le ^y)	Tumour epitopes	1CLY	(Jeffrey et al. 1995)
hu3S193	Fuc α 1,2Gal β 1,4(Fuc α 1,3)GlcNAc β 1,3Gal (Le ^y)	Tumour epitopes	1S3K	(Ramsland et al. 2004)
291_2G3-a	Gal β 1,4(Fuc α 1,3)GlcNAc β	Tumour epitopes	1UZ8	(van Roon et al. 2004)

(Le^x)

237mAb	ERGT(GalNAc)KPPPLEELS	Tumour epitopes	3IET	(Brooks, Schietinger, et al. 2010)
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