th Screening Strategy	gp160 and p24 binding	gp160 and p24 binding	Microneutralization	gp160 and p24 binding	Microneutralization	Microneutralization	Microneutralization	gp140 binding	Microneutralization	Microneutralization	Microneutralization	Microneutralization	Phage library	EBV- immortalization	Cell sorting/RT-PCR	Coll conting/BT DCB						
HCDR3 Length	24	20	22	16	21	21	26	26	20	30	26	33	20	21	14	16	12	12	18	15	16	10
$\mathbf{SHM}$	15.2	15.6	22.1	33.6	27.9	23.2	21.2	24.4	8.92	15.416.8	23.319.5	22.8	17.3	36.7	38.8	34.9	36.9	36.9	44	31.931.9	38.2	29.4
VH	25*	169	315	321	439	439	459	459	439	333	320	18	1-3	330	12	12	12	12	12	12	12	12
Breadth	%0209	8696	88%	2530%	7075%	50%	6570%	2560%	3035%	7580%	50%	7580%	3035%	3035%	3095%	50%	8290%	NA	%06	%08	8290%	%0209
Specificity	gp41 MPER	gp41 MPER	gp41 MPER	gp120 glycans	Glycans and V3 -strand	Glycans and V3 -strand	Complex type V3 N-glycans	Complex type V3 N-glycans	Glycans and V4	Glycans and $V1/V2$	Glycans and $V1/V2$	Glycans and $V1/V2$	gp120 CD4bs	gp120 CD4bs	gp120 CD4bs	gp120 CD4bs	gp120 CD4bs	gp120 CD4bs	gp120 CD4bs	gp120 CD4bs	gp120 CD4bs	CD4i/V3
Antibody	2F5	4E10	1EO8	2G12	PGT128	PGT127	PGT121	10 - 1074	PGT135	PG9/PG16	CH01 CH04	PGT145	b12	HJ16	VRC01	VRC03	3BNC117	3BNC60	NIH45-46	CH30 CH34	PGV04	3BC176

Table 1: Add caption