

APPENDIX B

This appendix lists the 93 different alternative antibody architecture and Fc mutant constructs that were cloned, expressed, and tested for neutralization where expression was successful (N.D., not done).

	Name	Notes	Cloned	Expresses	Neutralizes
1	(CD4-GCN4) ₃	Trimeric GCN4 design	✓	X	
2	(CD4-GCN4) ₄	Tetrameric GCN4 design	✓	X	
3	(CD4-GCN4) ₆	Hexameric GCN4 design	✓	X	
4	(CD4-scFvE51) ₃	Trimeric GCN4 design	✓	X	
5	(CD4-scFvE51) ₄	Tetrameric GCN4 design	✓	X	
6	(dsFvb12-GCN4) ₃ - VLG44C/VHQ105C	Trimeric GCN4 design/disulfide Fv	✓	X	
7	(dsFvb12-GCN4) ₄ - VLG44C/VHQ105C	Tetrameric GCN4 design/disulfide Fv	✓	X	
8	(Fab 2G12-GCN4) ₄	Tetrameric GCN4 design	✓	X	
9	(Fab 2G12-GCN4) ₆	Hexameric GCN4 design	✓	X	
10	(Fab b12-GCN4) ₃	Trimeric GCN4 design	✓	X	
11	(Fab b12-GCN4) ₄	Tetrameric GCN4 design	✓	X	
12	Bs(scFv) ₂ -Fab 4E10-2F5		✓	X	
13	Bs(scFv) ₄ -IgG 4E10-2F5		✓	X	
14	diabody 2F5-4E10		✓	✓	✓
15	diabody 4E10-4E10		✓	✓	✓
16	diabody b12-4E10		✓	✓	✓
17	diabody b12-b12		✓	✓	✓
18	IgG 2F5 (G ₄ S) ₁	Random coil extension	✓	✓	✓
19	IgG 2F5 (G ₄ S) ₂	Random coil extension	✓	N.D.	
20	IgG 2F5 (G ₄ S) ₃	Random coil extension	✓	✓	✓
21	IgG 2F5 (G ₄ S) ₄	Random coil extension	✓	N.D.	
22	IgG 2F5 (G ₄ S) ₅	Random coil extension	✓	✓	✓
23	IgG 2F5 (G ₄ S) ₆	Random coil extension	✓	N.D.	
24	IgG 2F5 (G ₄ S) ₇	Random coil extension	✓	X	
25	IgG 2F5 CD4	Protein fusion extension	✓	X	
26	IgG 2F5 invasin	Protein fusion extension	✓	X	
27	IgG 2F5 invasin ₁₋₃	Protein fusion extension	✓	✓	✓
28	IgG 2F5 neogenin	Protein fusion extension	✓	X	
29	IgG 2F5 S239D	ADCC enhancement	✓	✓	N.D.
30	IgG 2F5 S239D/I332E	ADCC enhancement	✓	✓	N.D.
31	IgG 2F5 titin ₁₆₈₋₁₇₀	Protein fusion extension	✓	X	
32	IgG 2G12 (G ₄ S) ₁	Random coil extension	✓	✓	✓
33	IgG 2G12 (G ₄ S) ₃	Random coil extension	✓	✓	✓
34	IgG 2G12 (G ₄ S) ₅	Random coil extension	✓	✓	✓
35	IgG 2G12 (G ₄ S) ₇	Random coil extension	✓	✓	✓
36	IgG 2G12 CD4	Protein fusion extension	✓	X	
37	IgG 2G12 invasin	Protein fusion extension	✓	✓	✓
38	IgG 2G12 invasin1-3	Protein fusion extension	✓	✓	✓
39	IgG 2G12 neogenin	Protein fusion extension	✓	✓	✓
40	IgG 2G12 S239D	ADCC enhancement	✓	✓	N.D.
41	IgG 2G12 S239D/I332E	ADCC enhancement	✓	✓	N.D.
42	IgG 2G12 titin ₁₆₈₋₁₇₀	Protein fusion extension	✓	X	
43	IgG 4E10 (G ₄ S) ₁	Random coil extension	✓	✓	✓
44	IgG 4E10 (G ₄ S) ₃	Random coil extension	✓	✓	✓
45	IgG 4E10 (G ₄ S) ₅	Random coil extension	✓	✓	✓
46	IgG 4E10 (G ₄ S) ₇	Random coil extension	✓	X	
47	IgG 4E10 CD4	Protein fusion extension	✓	X	

48	IgG 4E10 invasin	Protein fusion extension	✓	X	
49	IgG 4E10 invasin ₁₋₃	Protein fusion extension	✓	✓	✓
50	IgG 4E10 neogenin	Protein fusion extension	✓	✓	✓
51	IgG 4E10 S239D	ADCC enhancement	✓	✓	N.D.
52	IgG 4E10 S239D/I332E	ADCC enhancement	✓	✓	N.D.
53	IgG scFv4E10	scFv fusion instead of Fab	✓	✓	✓
54	IgG 4E10 titin 168-170	Protein fusion extension	✓	X	
55	IgG b12 (G ₄ S) ₁	Random coil extension	✓	✓	✓
56	IgG b12 (G ₄ S) ₂	Random coil extension	✓	N.D.	
57	IgG b12 (G ₄ S) ₃	Random coil extension	✓	✓	✓
58	IgG b12 (G ₄ S) ₄	Random coil extension	✓	N.D.	
59	IgG b12 (G ₄ S) ₅	Random coil extension	✓	✓	✓
60	IgG b12 (G ₄ S) ₆	Random coil extension	✓	N.D.	
61	IgG b12 (G ₄ S) ₇	Random coil extension	✓	X	
62	IgG b12 CD4	Protein fusion extension	✓	X	
63	IgG b12 invasin	Protein fusion extension	✓	X	
64	IgG b12 invasin ₁₋₃	Protein fusion extension	✓	✓	✓
65	IgG b12 neogenin	Protein fusion extension	✓	X	
66	IgG b12 S239D	ADCC enhancement	✓	✓	N.D.
67	IgG b12 S239D/I332E	ADCC enhancement	✓	✓	N.D.
68	IgG b12 scFv	scFv fusion instead of Fab	✓	✓	✓
69	IgG b12 titin ₁₆₈₋₁₇₀	Protein fusion extension	✓	X	
70	IgG dsFv4E10-(G ₄ S) ₂ - VLG44C/VHQ105C	disulfide Fv fusion	✓	✓	✓
71	IgG dsFv4E10-(G ₄ S) ₇ - VLG44C/VHQ105C	disulfide Fv fusion	✓	✓	✓
72	IgG dsFvb12-(G ₄ S) ₂ - VLG44C/VHQ105C	disulfide Fv fusion	✓	N.D.	
73	IgG dsFvb12-(G ₄ S) ₂ - VLG44C/VHQ105C	disulfide Fv fusion	✓	N.D.	
74	IgG GFP	To make heterodimers	✓	✓	X
75	IgG sCD4-17b		✓	✓	✓
76	IgG T1249	C-peptide	✓	✓	✓
77	IgG T20	C-peptide	✓	✓	✓
78	IgG T2635	C-peptide	✓	✓	✓
79	IgG T651	C-peptide	✓	✓	✓
80	scBvFv 2F5-4E10		✓	✓	✓
81	scBvFv 4E10-4E10		✓	✓	✓
82	scBvFv b12-4E10		✓	✓	✓
83	scBvFv b12-b12		✓	✓	✓
84	sCD4		✓	✓	✓
85	sCD4-17b		✓	✓	✓
86	scFv 2F5		✓	✓	✓
87	scFv 2G12		✓	N.D.	
88	scFv 4E10		✓	✓	✓
89	scFv b12		✓	✓	✓
90	scFv4E10-TACE-Fc-scFvb12	Random coil extension	✓	✓	✓
91	scFv4E10-TACE-Fc-scFvb12	Random coil extension	✓	✓	✓
92	Tet(scFv) ₄ 4E10-2F5-b12-17b		✓	X	
93	Tri(scFv) ₆ 4E10-2F5-b12		✓	X	