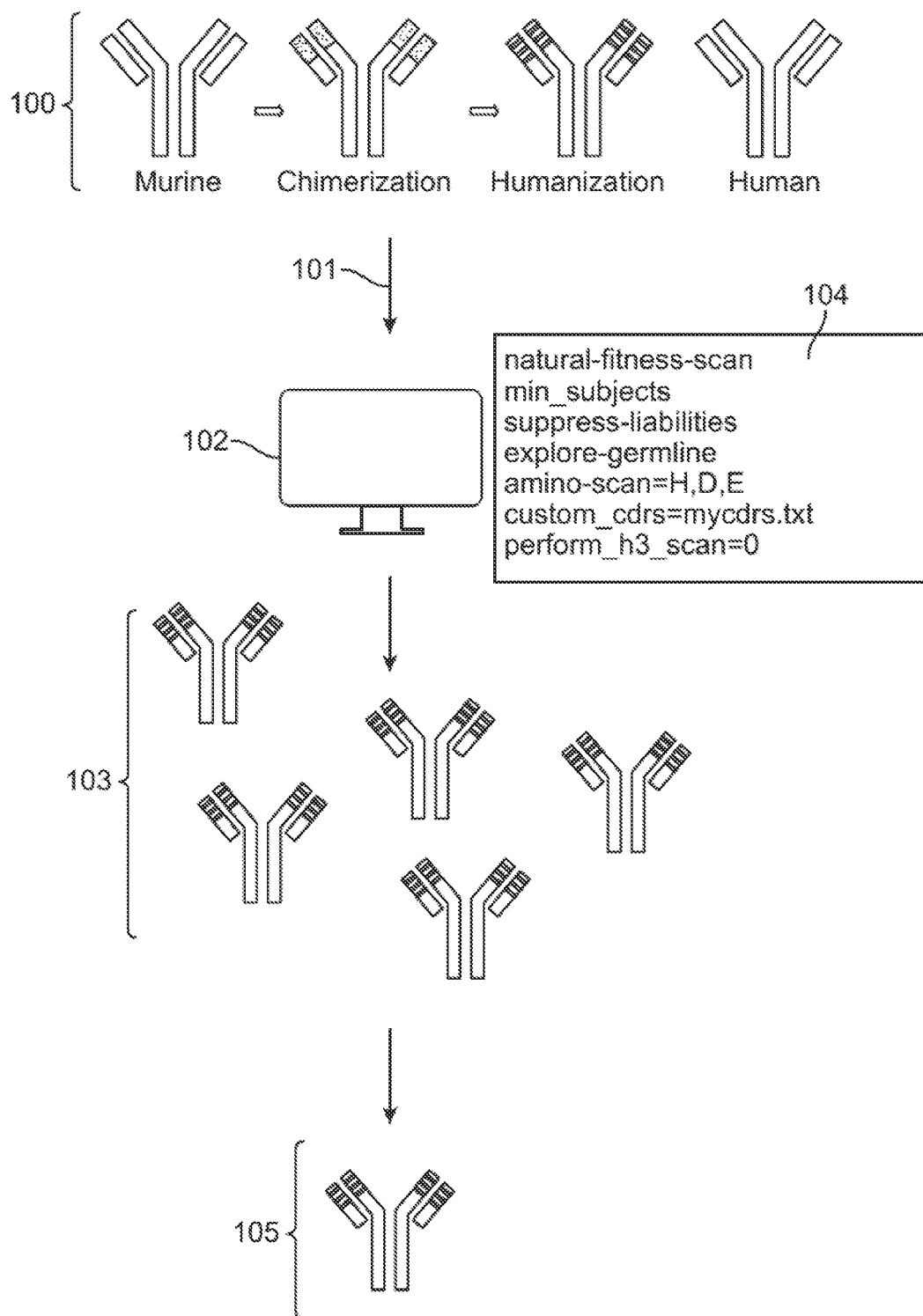


**FIG. 1**

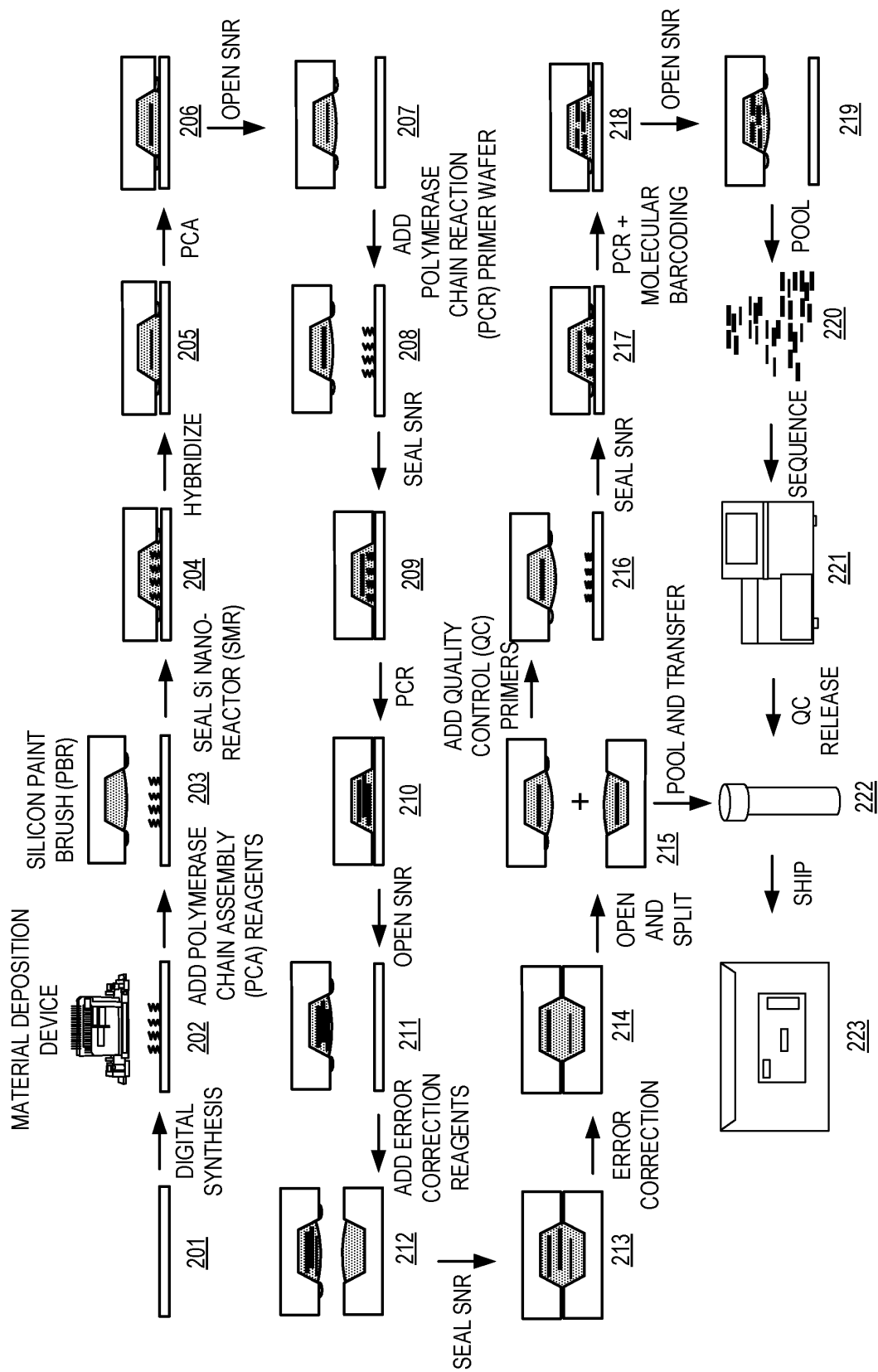


FIG. 2

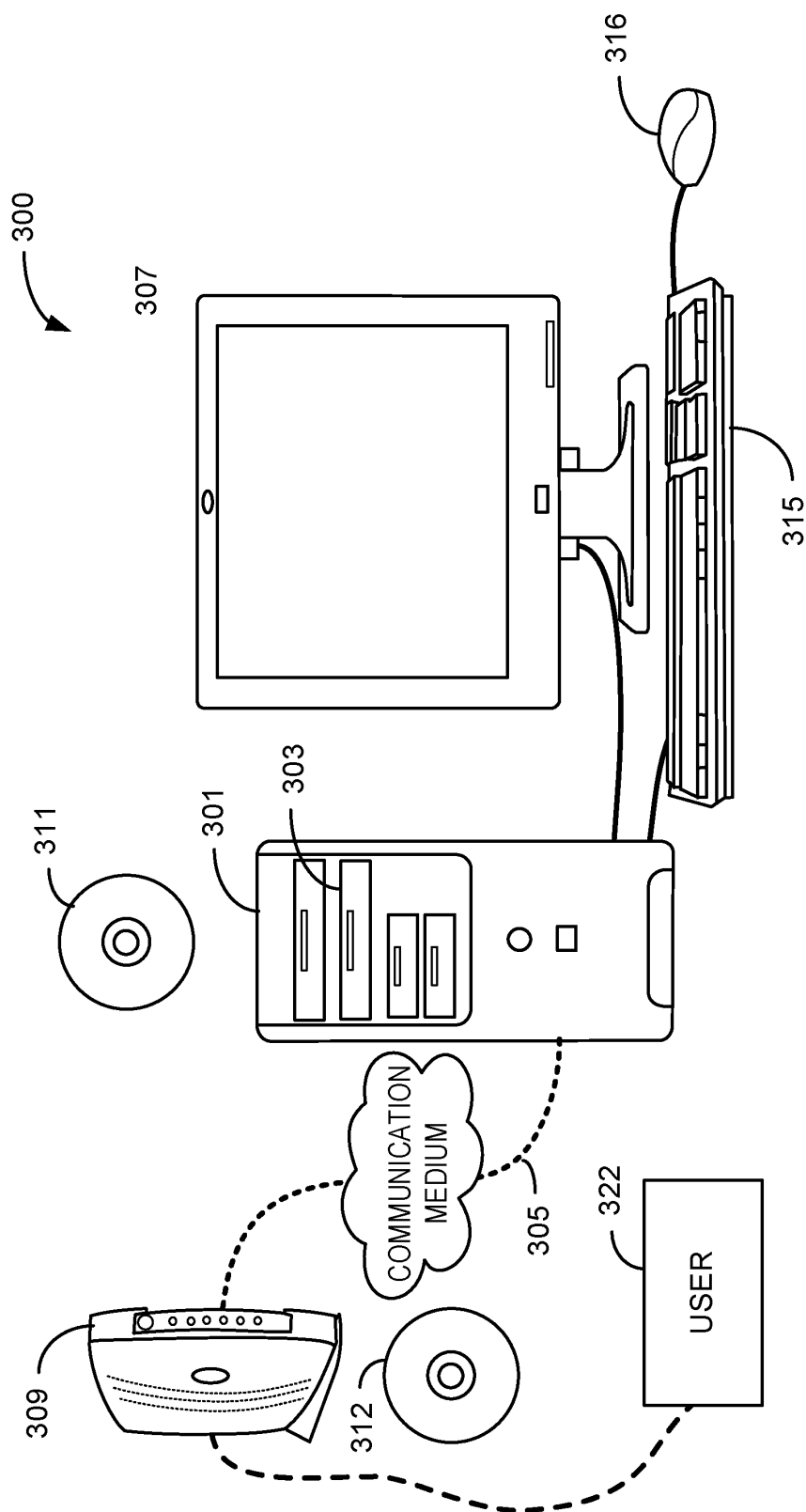


FIG. 3

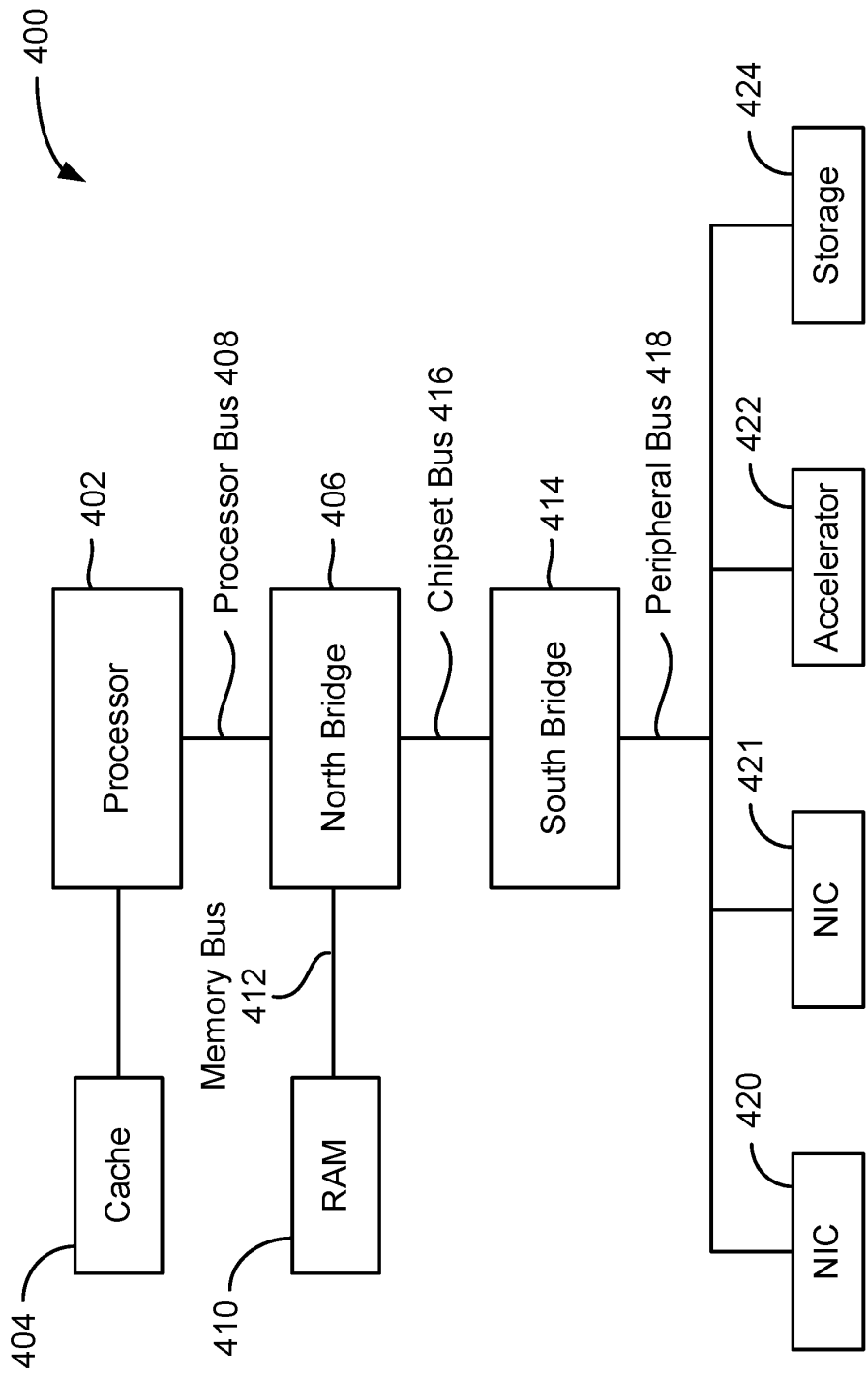


FIG. 4

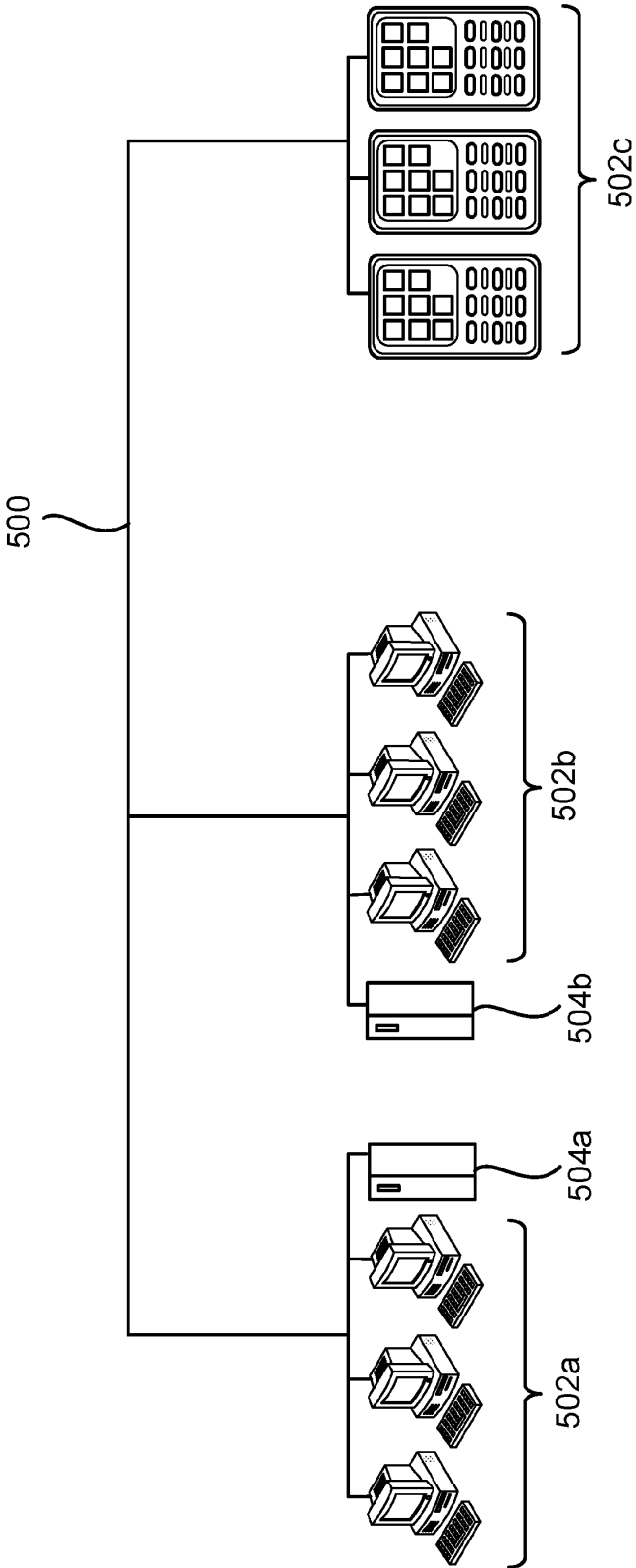
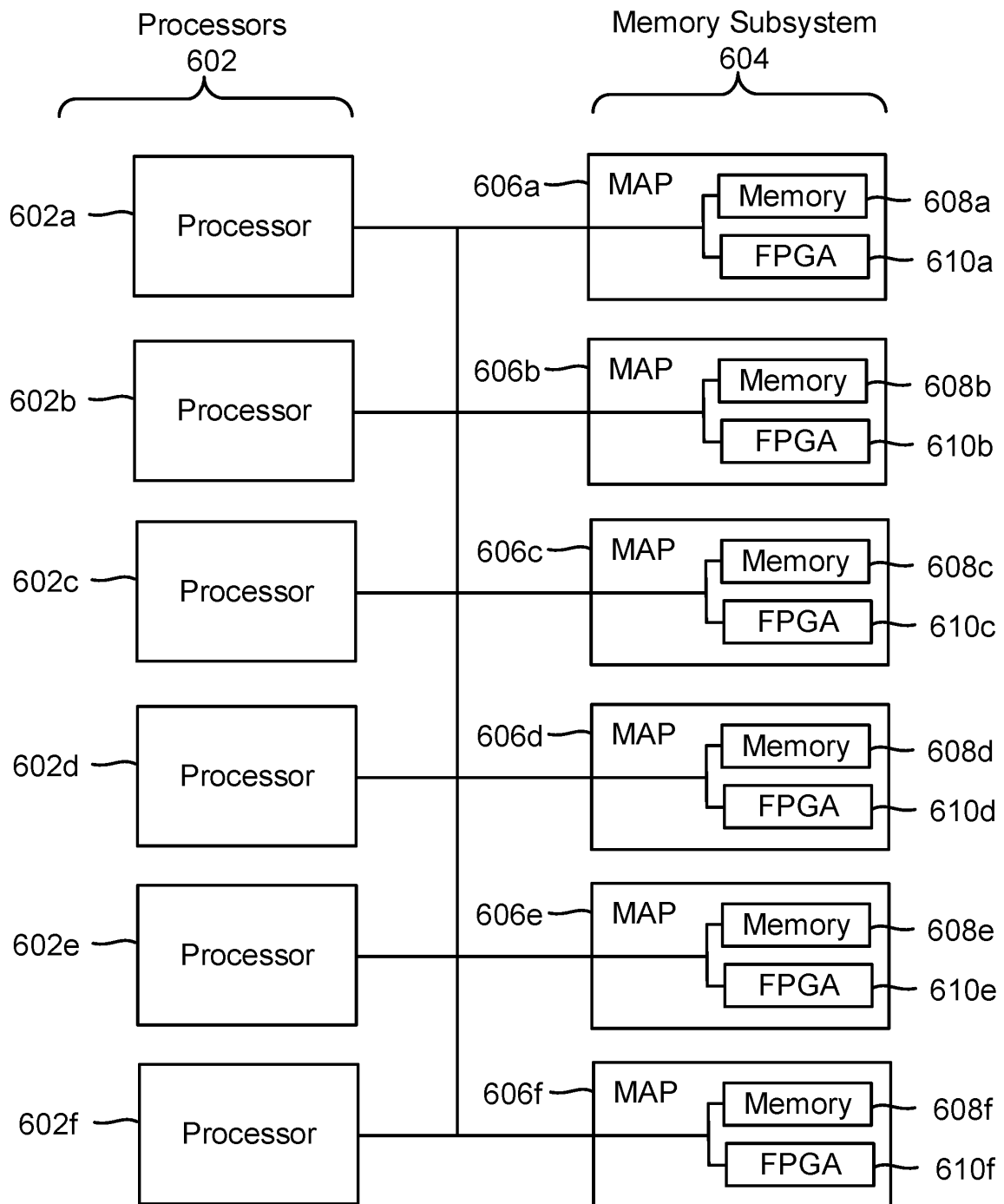


FIG. 5

**FIG. 6**

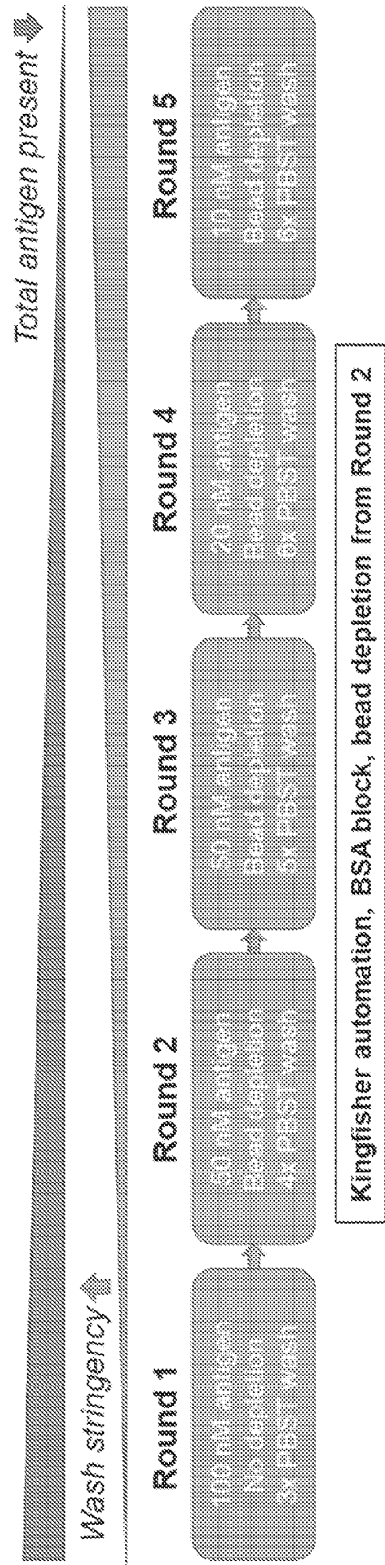
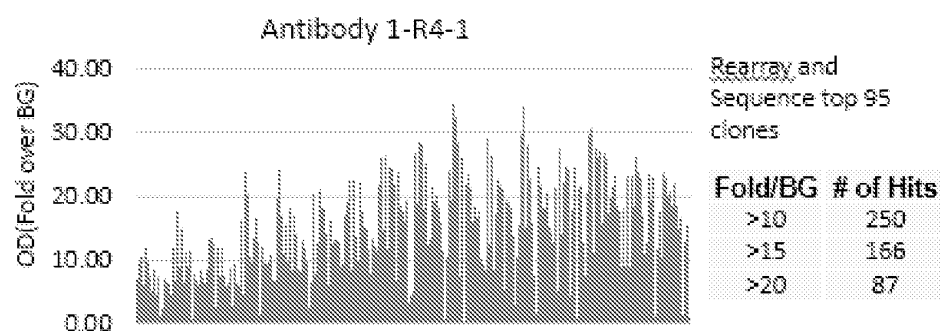
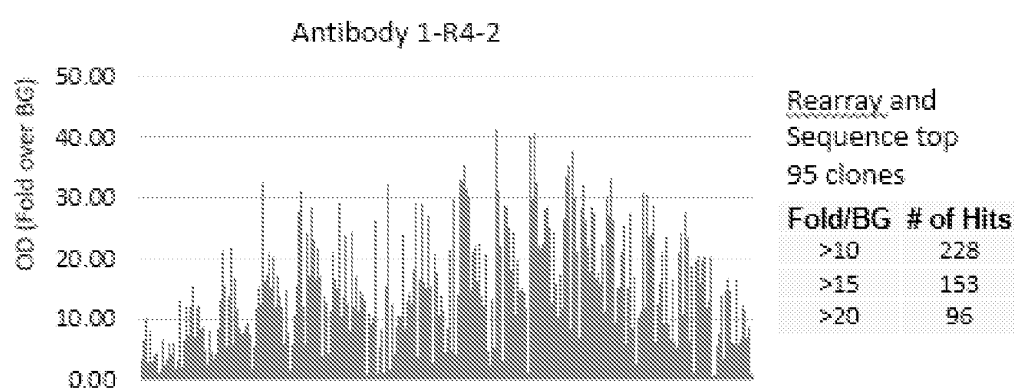
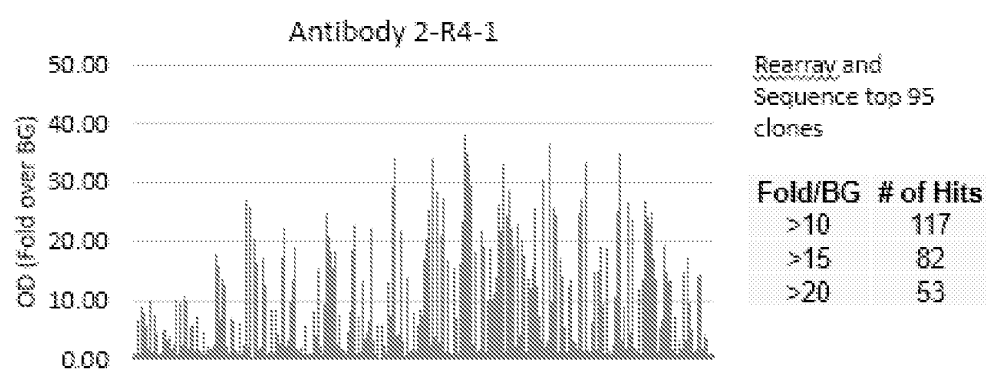
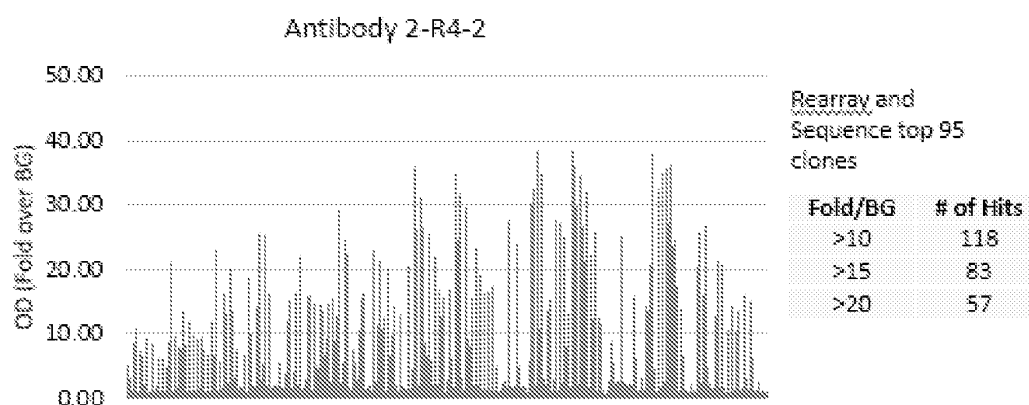
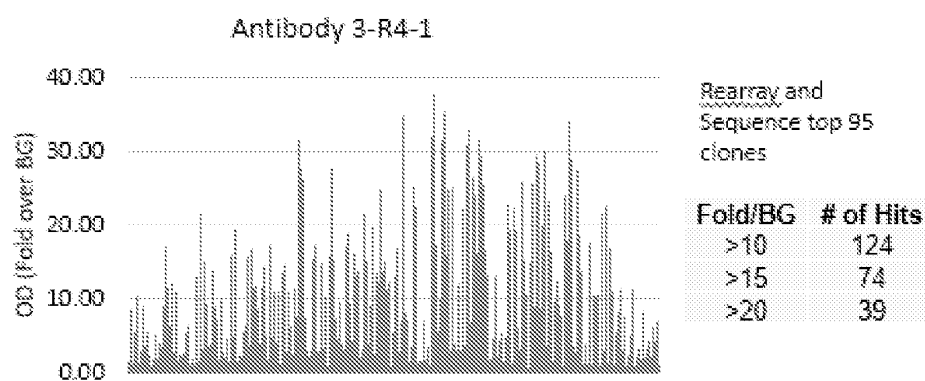
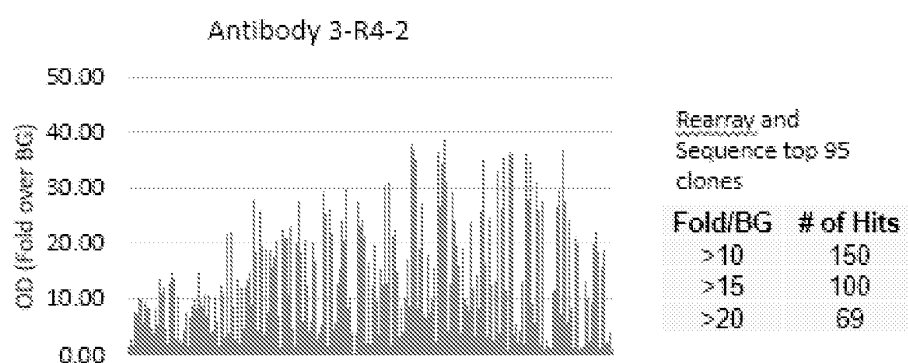


FIG. 7

**FIG. 8A****FIG. 8B****FIG. 8C**

**FIG. 8D****FIG. 9A****FIG. 9B**

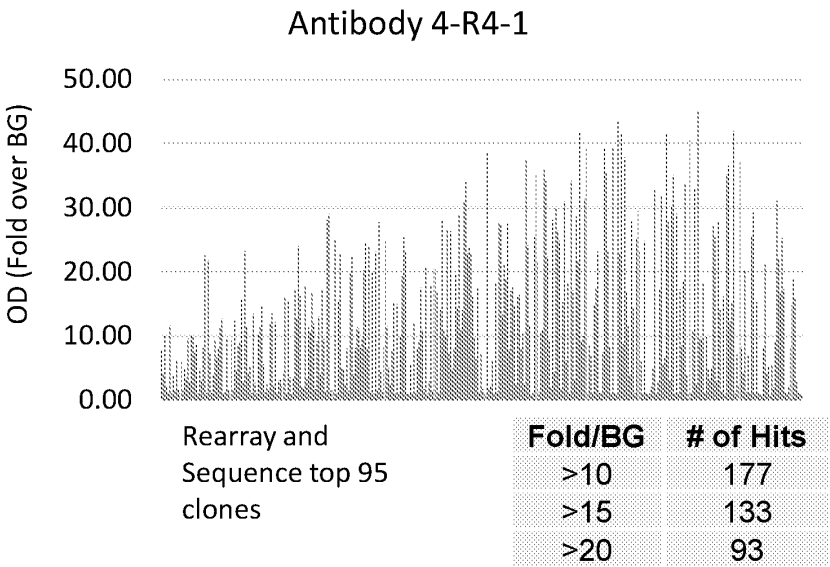


FIG. 9C

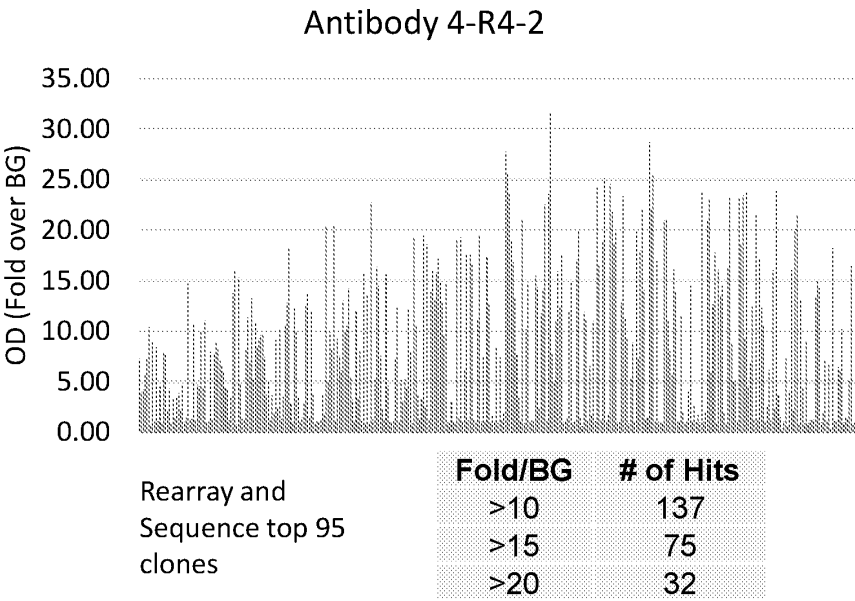
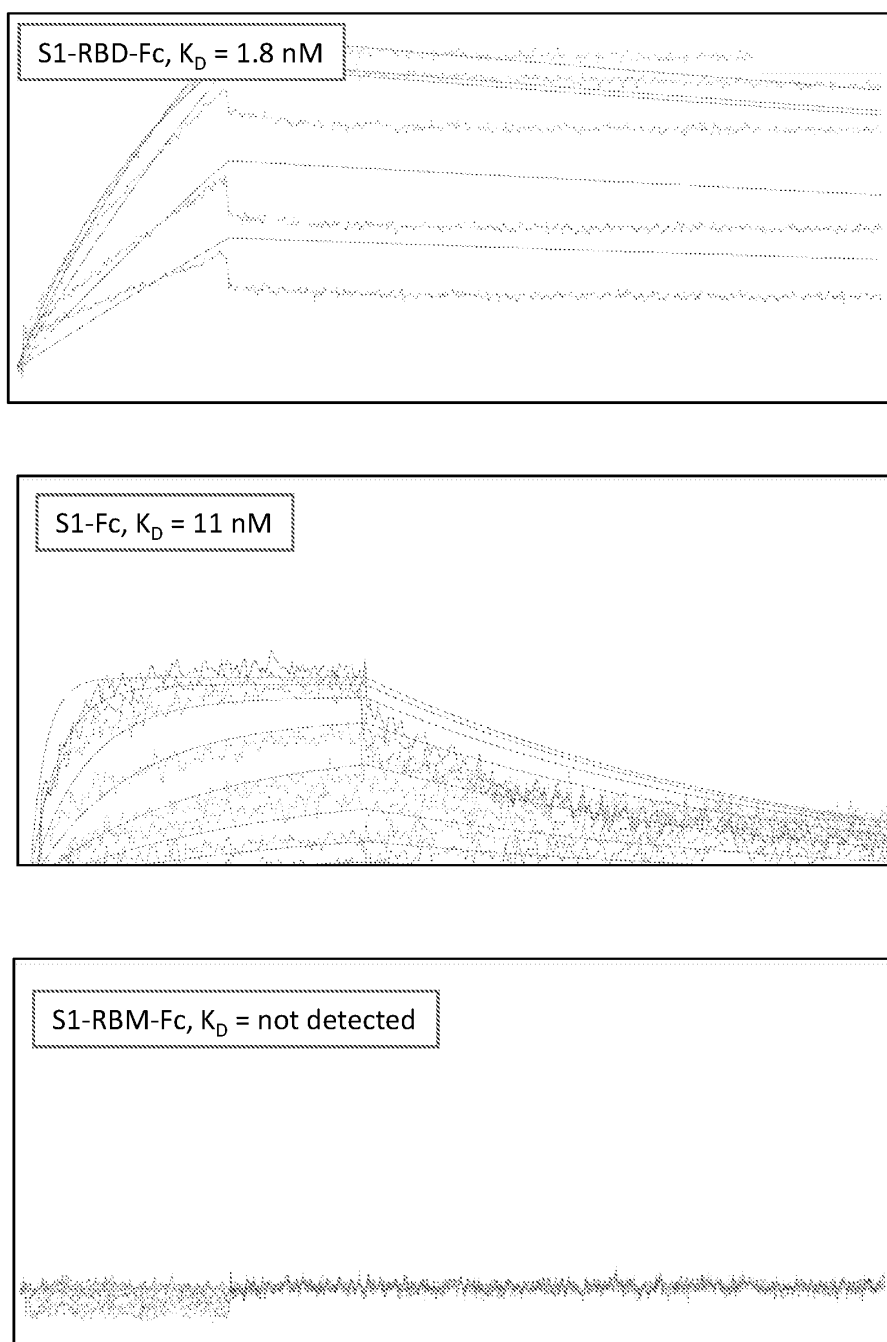


FIG. 9D

**FIG. 10**

S1, Variant 2-6

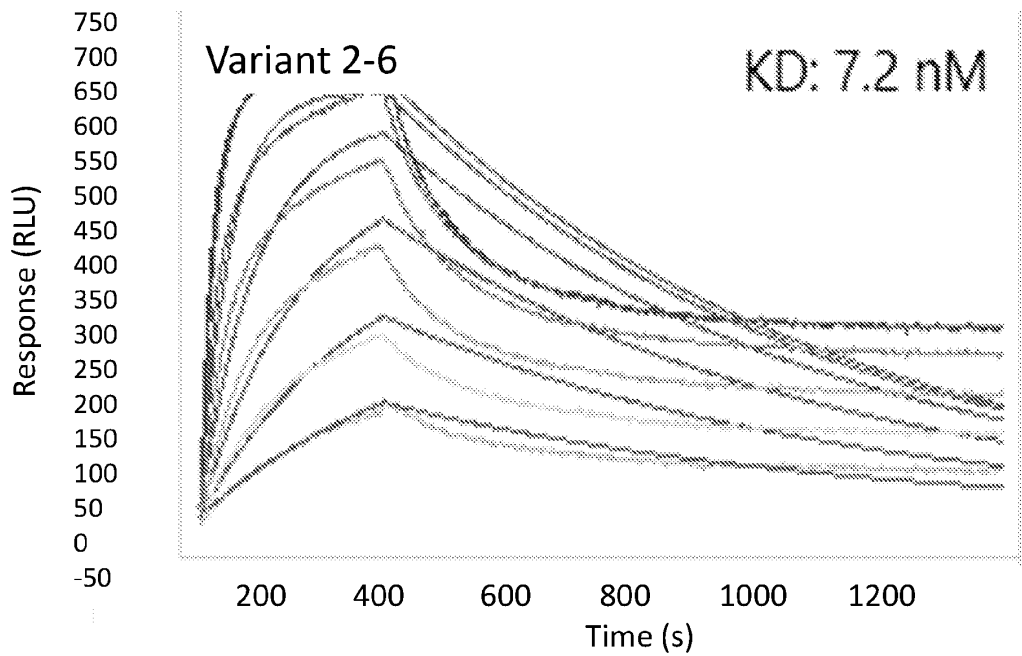


FIG. 11A

S Trimer Variant 2-6

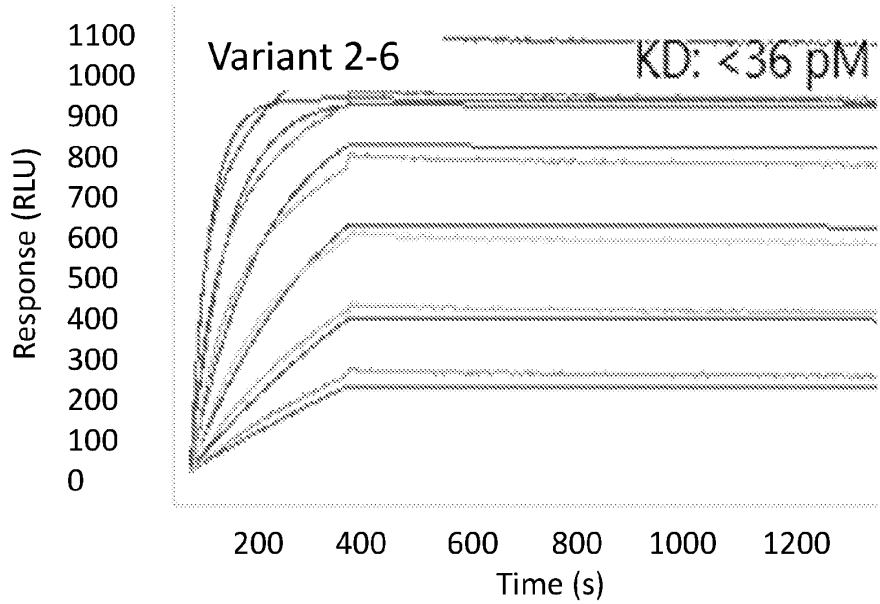


FIG. 11B

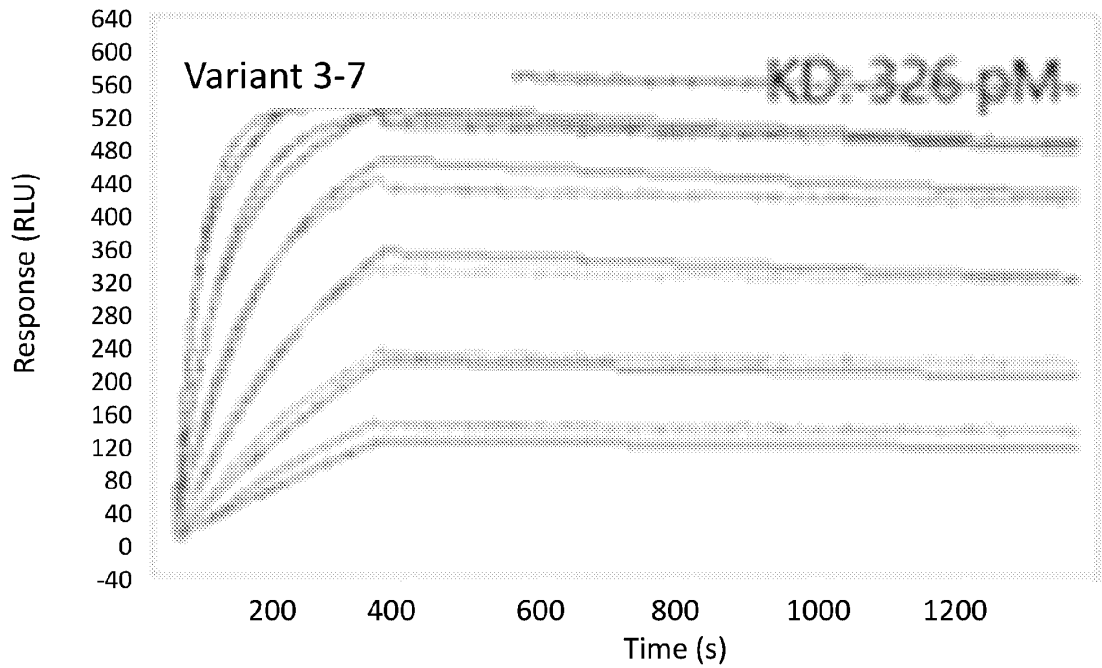


FIG. 12A

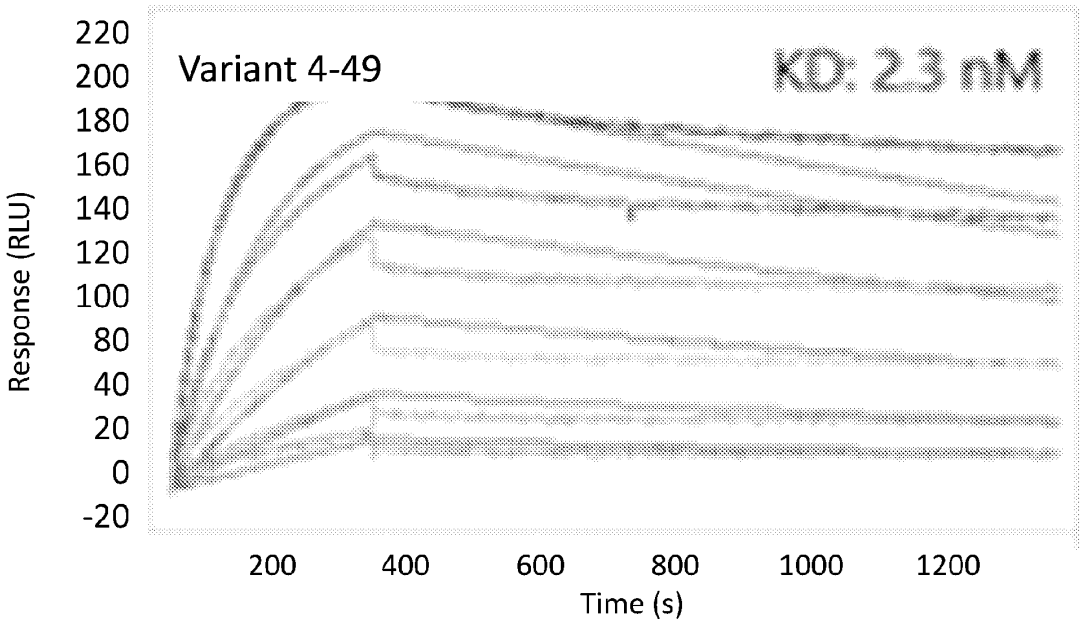


FIG. 12B



FIG. 12C

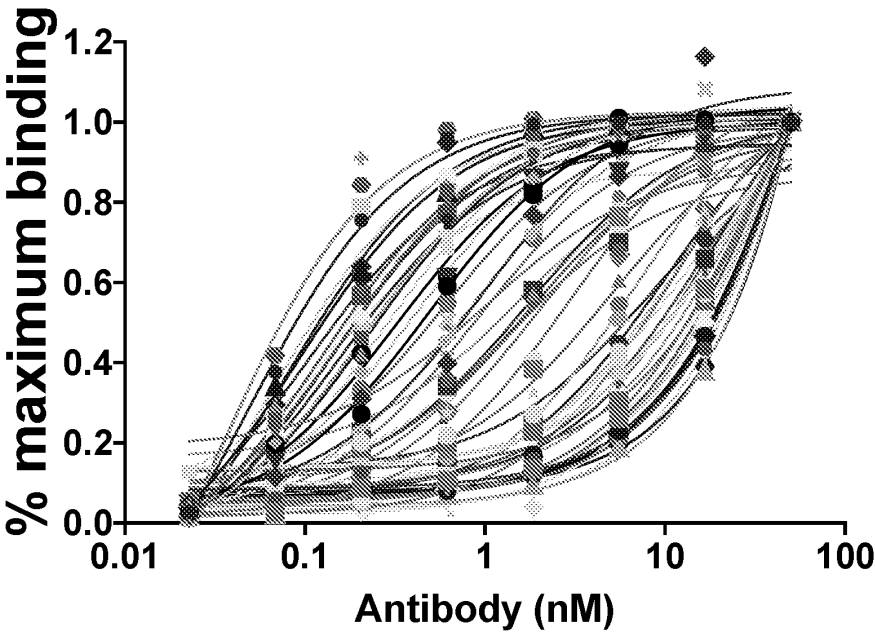


FIG. 13

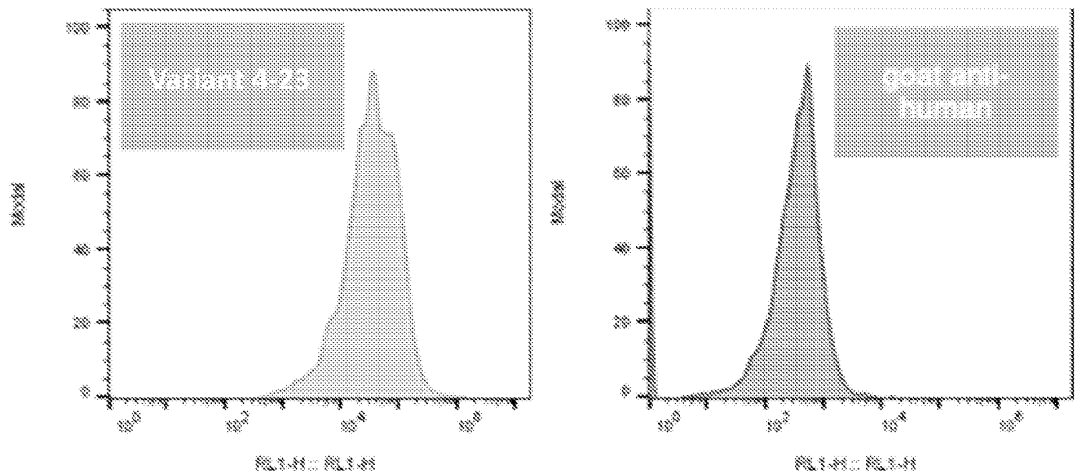


FIG. 14

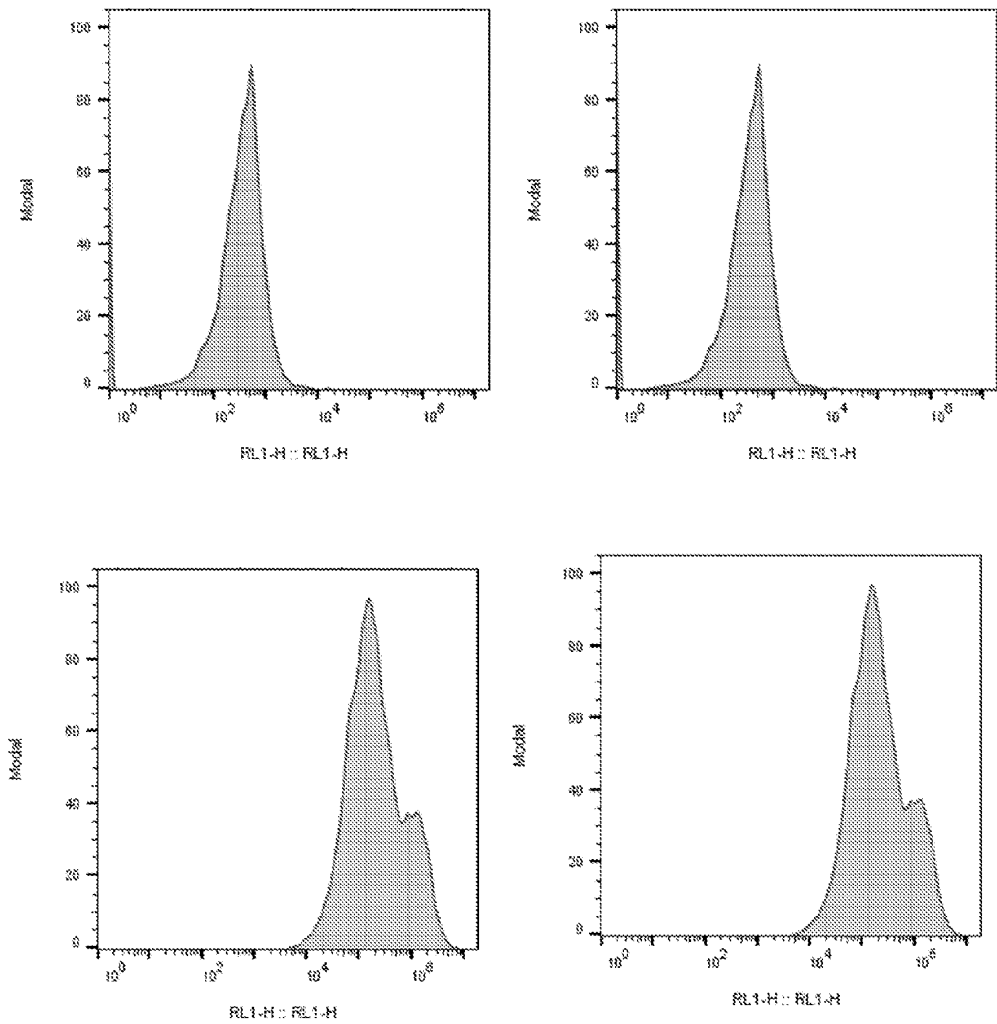
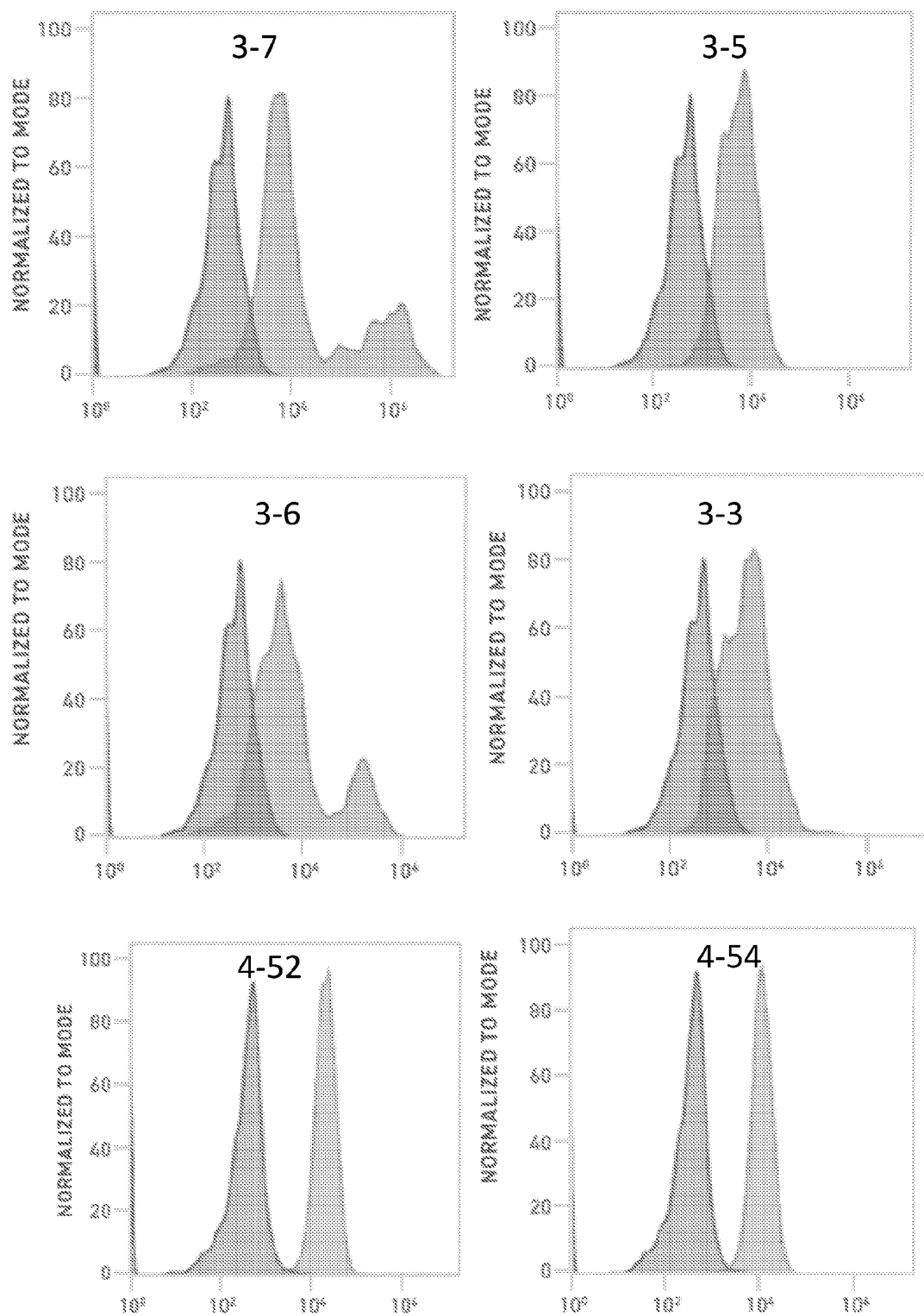
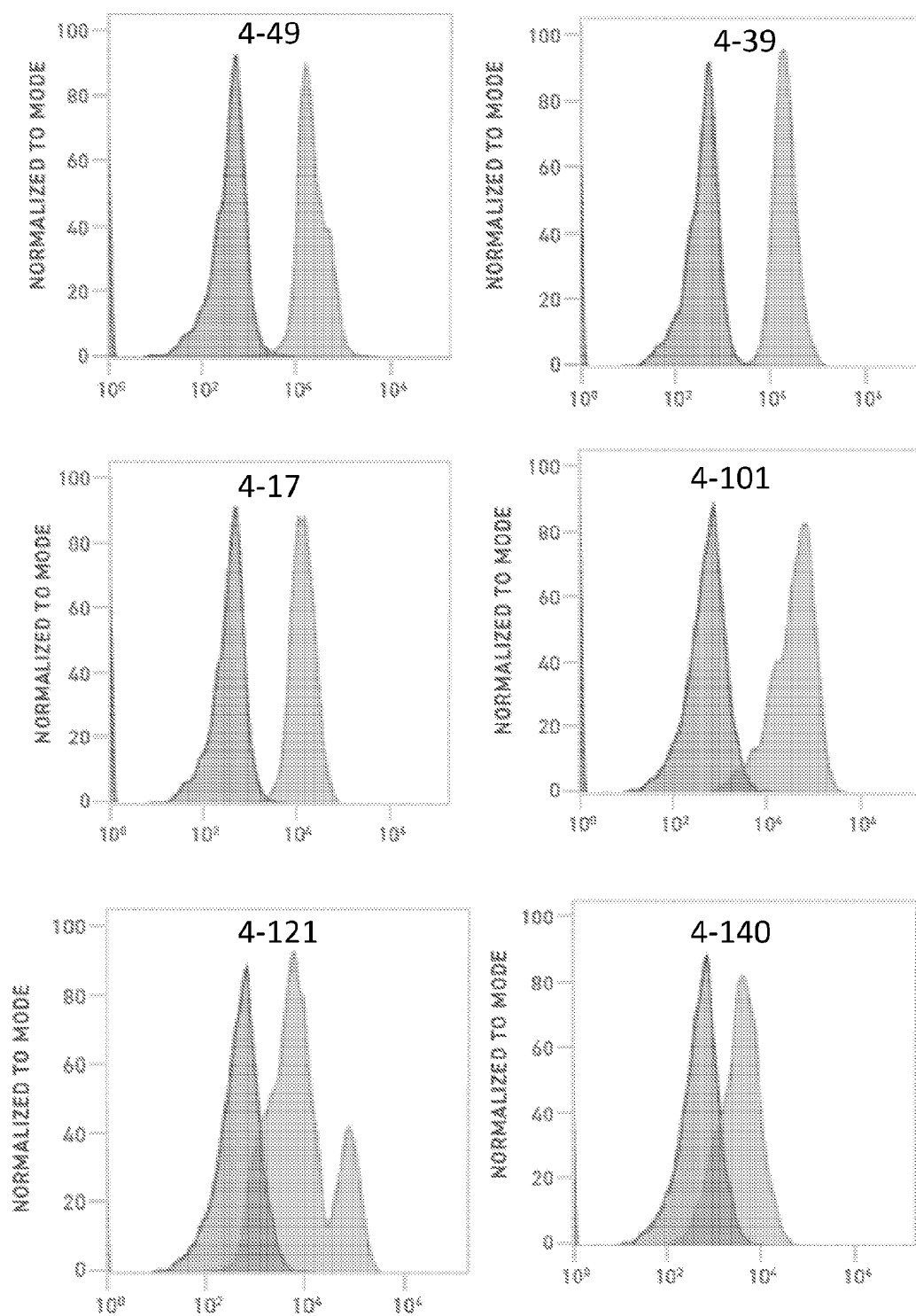


FIG. 15A

**FIG. 15B**

**FIG. 15C**

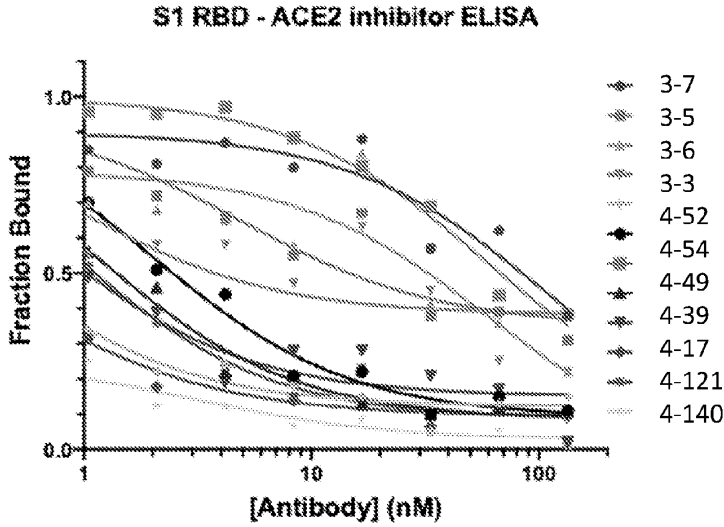


FIG. 15D

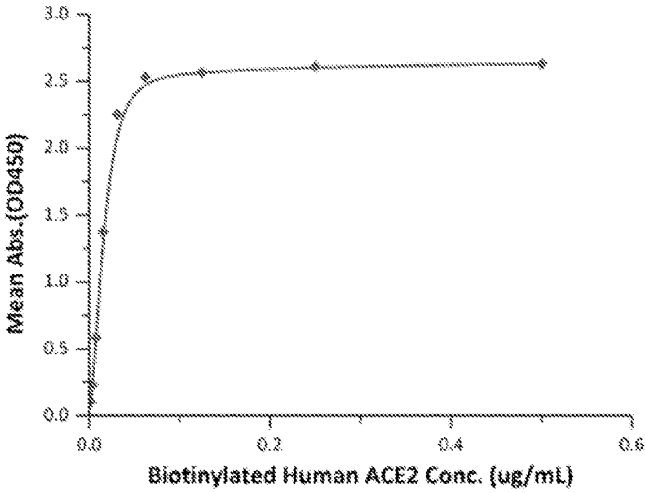


FIG. 16A

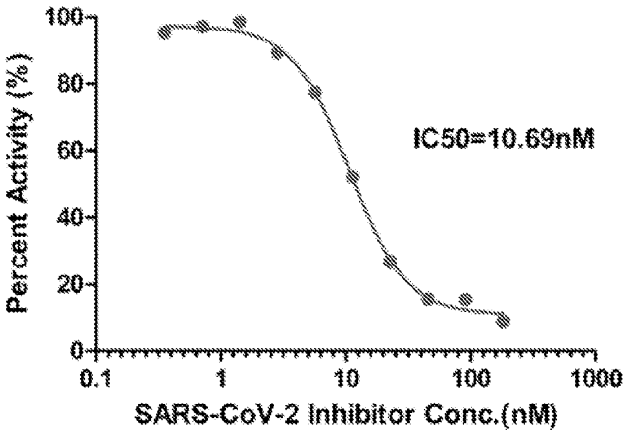


FIG. 16B

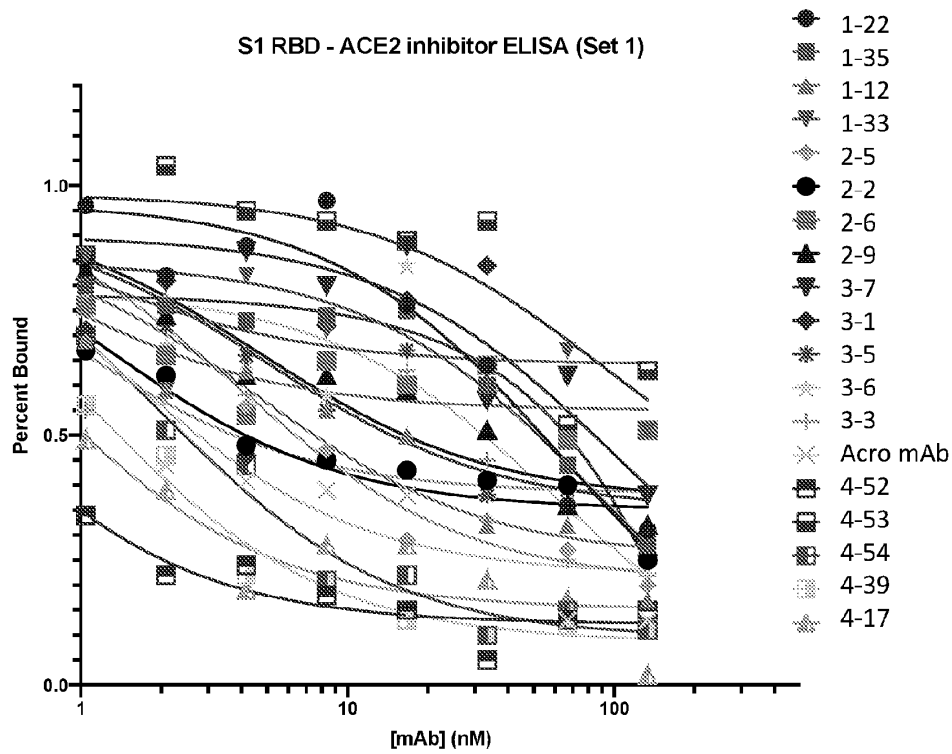


FIG. 17A

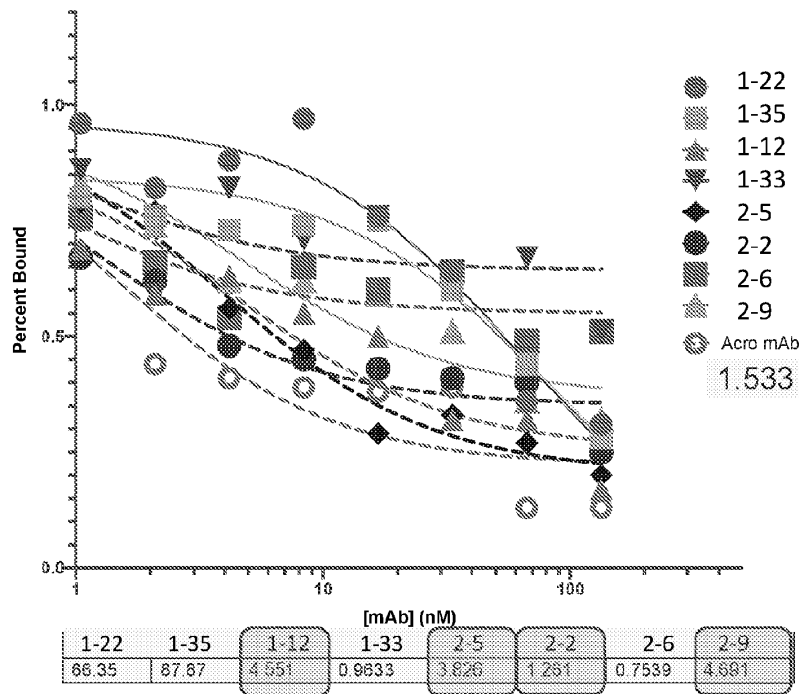
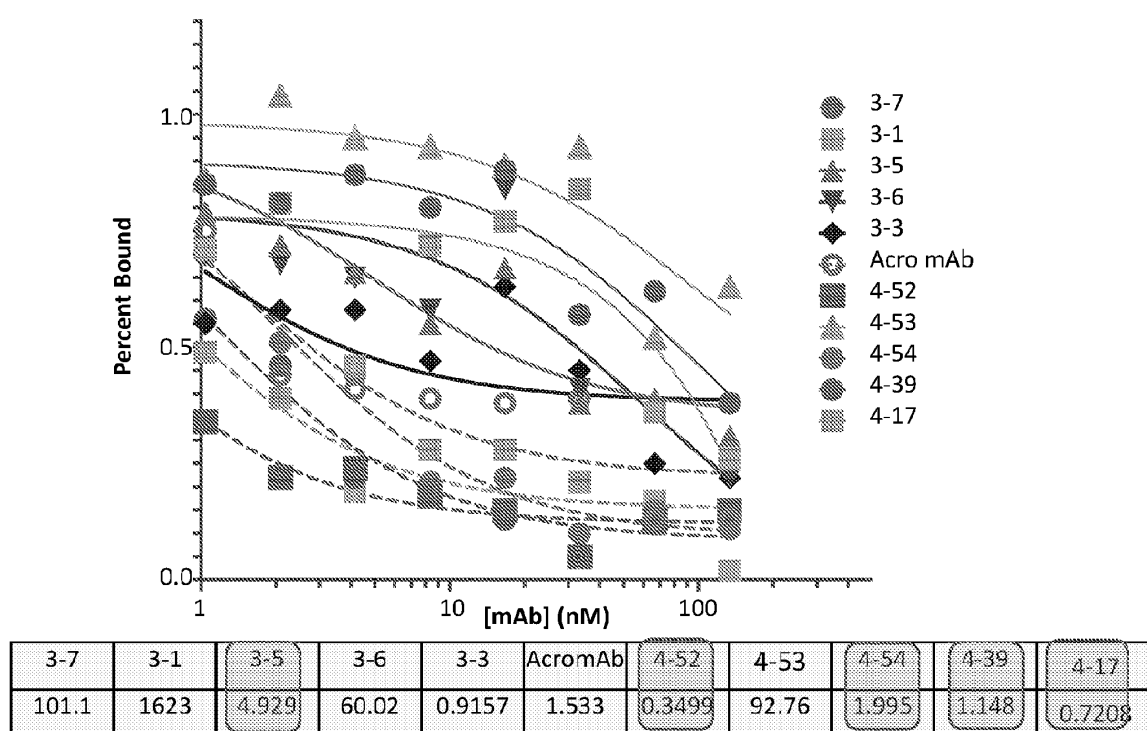
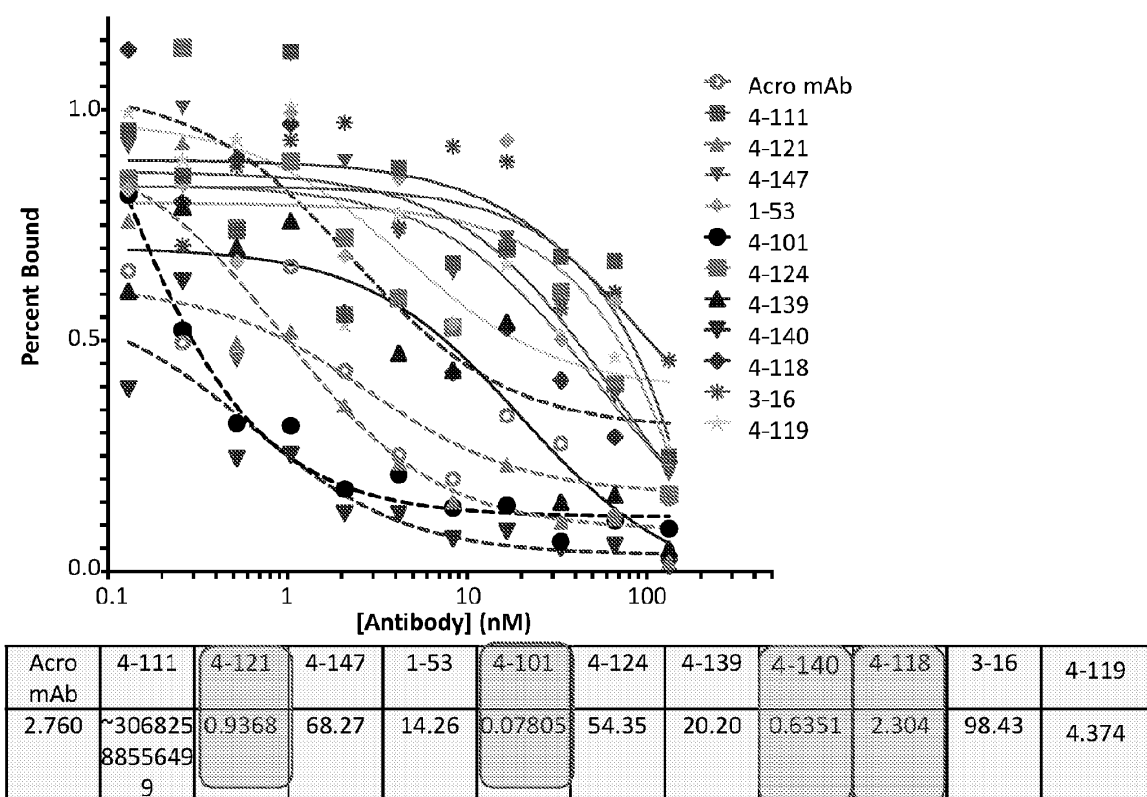


FIG. 17B

**FIG. 18A**

S1 RBD - ACE2 inhibitor ELISA (Set 2)

**FIG. 18B**

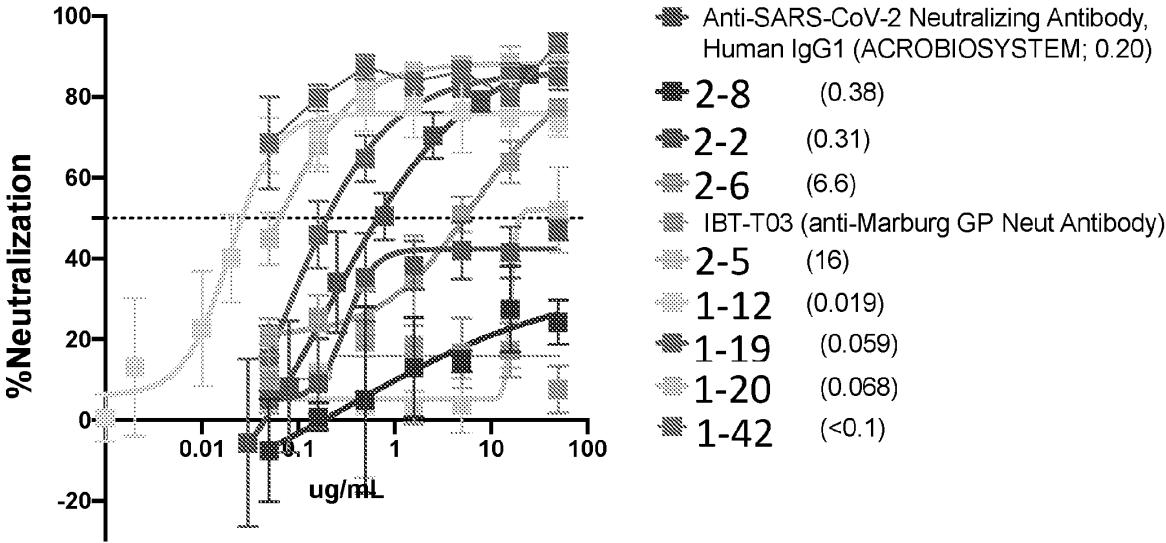


FIG. 18C

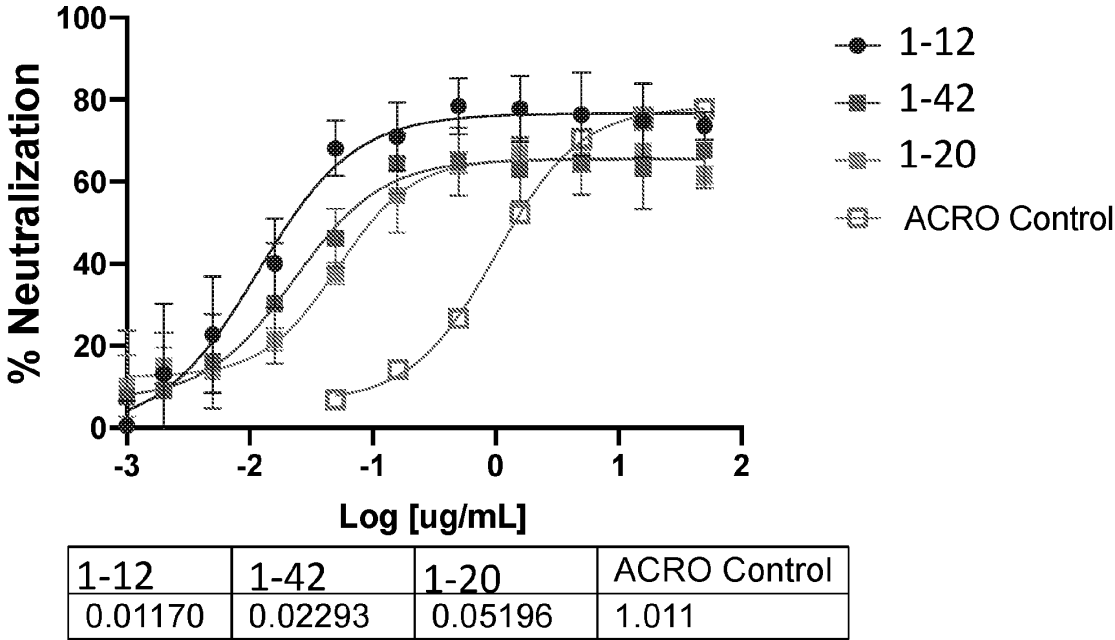
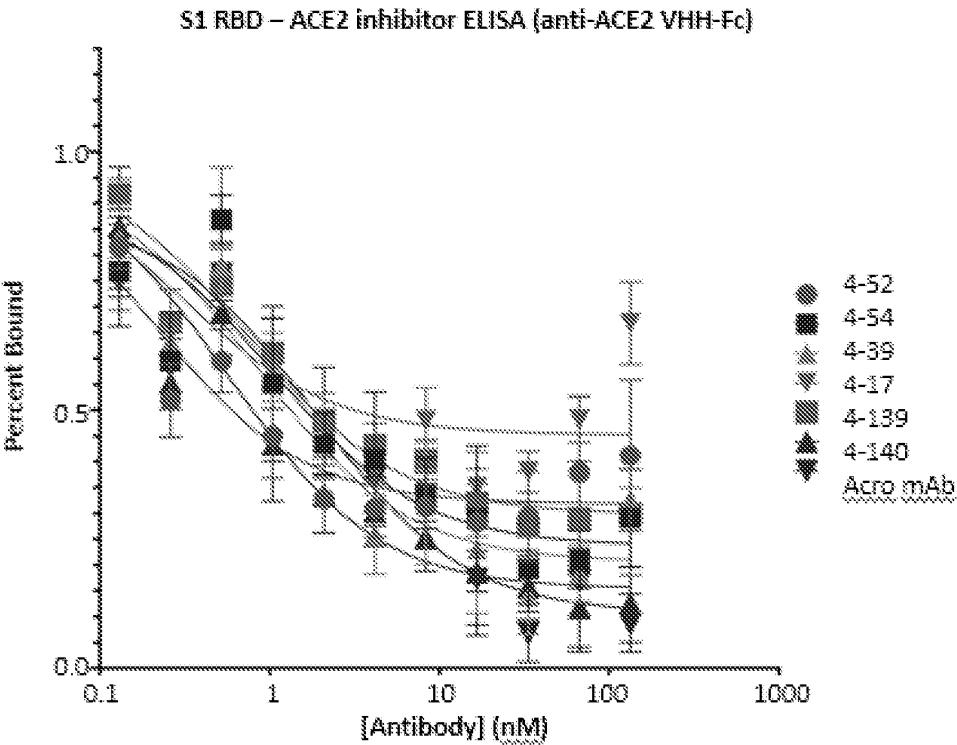
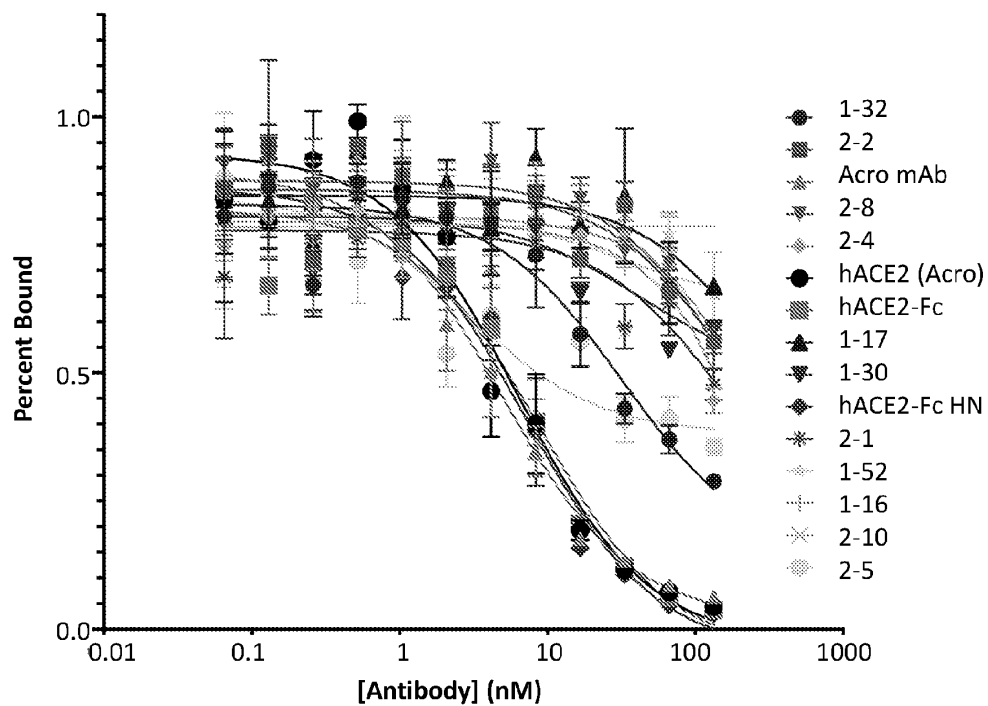


FIG. 18D



	4-52	4-54	4-39	4-17	4-139	4-140	AcromAb
IC50	0.2105	1.058	0.8651	0.3234	0.7782	0.5813	1.887

FIG. 19



Clone	IC50 (nM)	S1 SPR (nM)	S1 RBD SPR (nM)
1-32	32.2	184	-
2-5	2.9	0.78	0.31
Acro mAb	4.9	48	0.1

FIG. 20

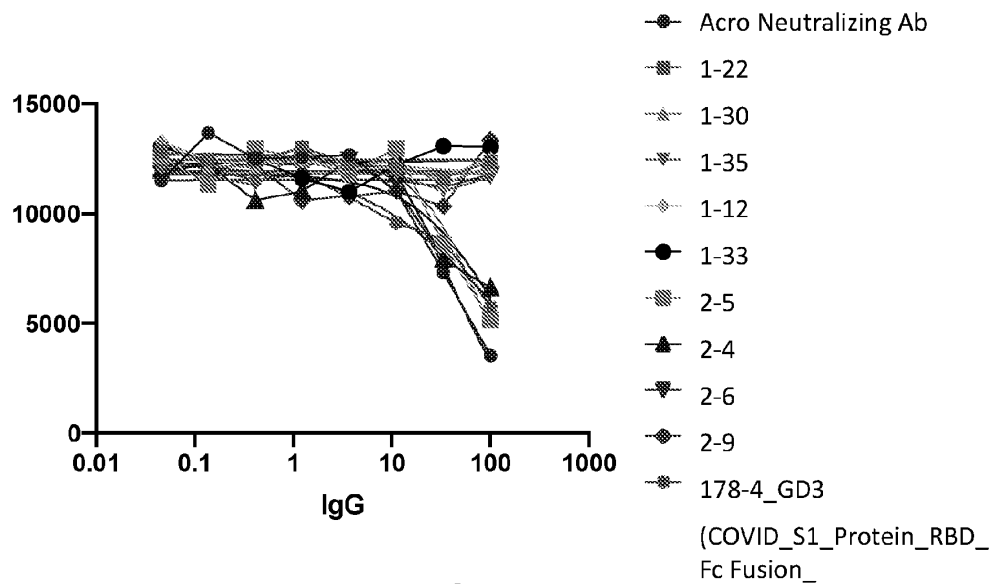


FIG. 21A

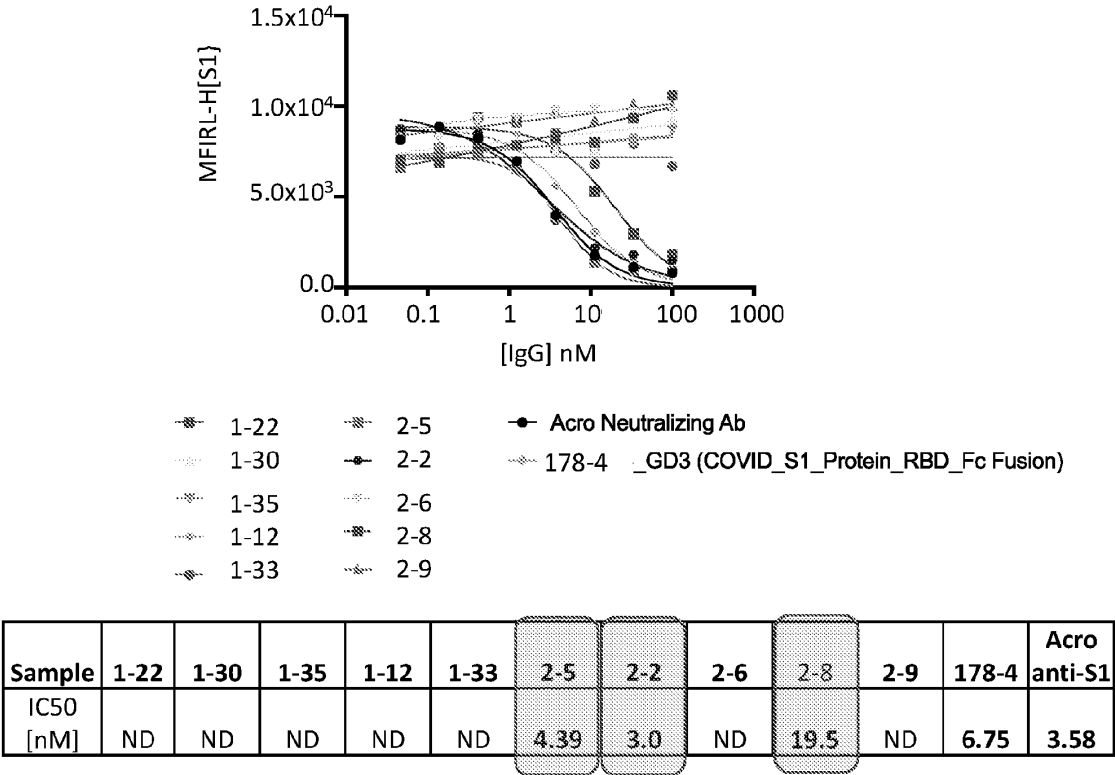
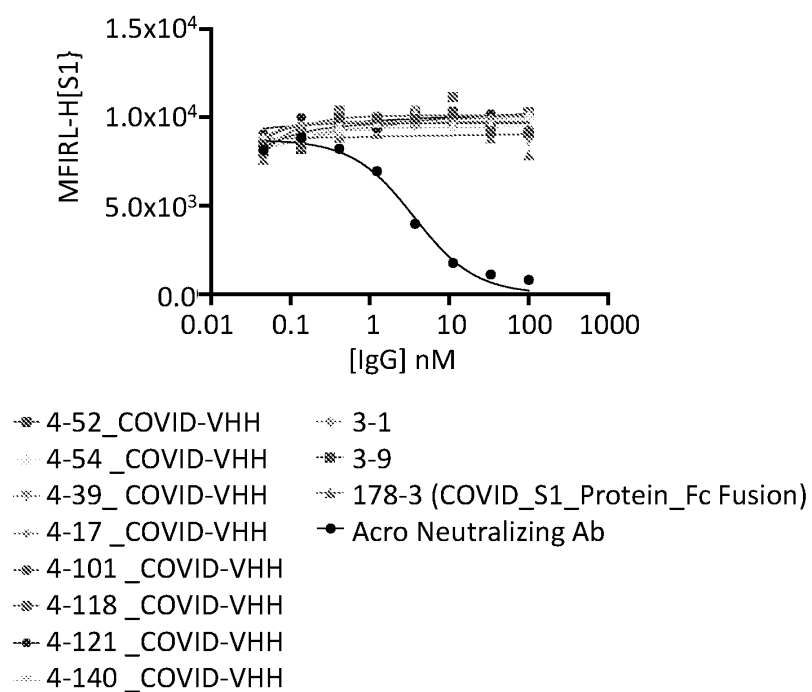
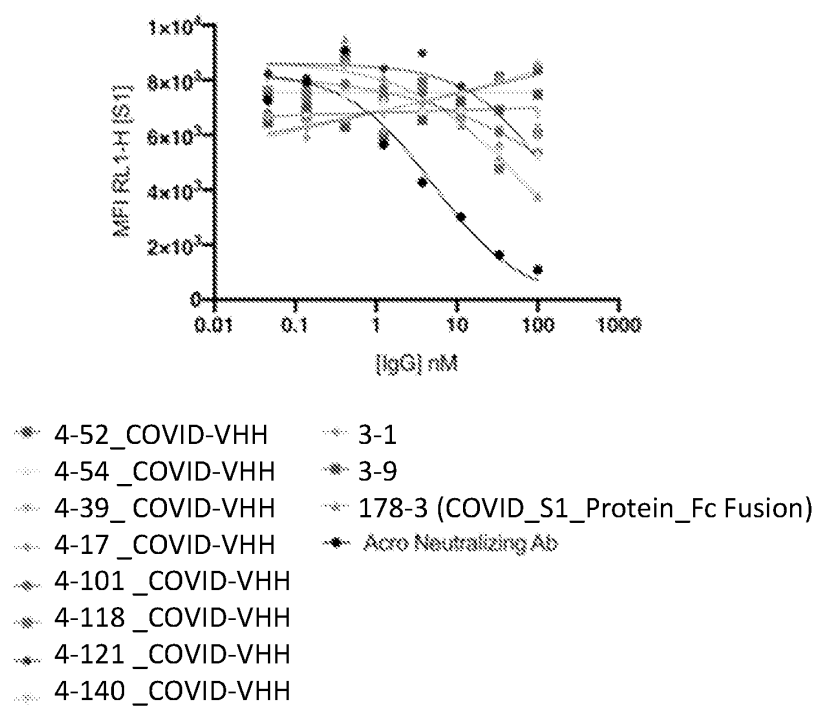


FIG. 21B



Sample	3-1	3-9	4-52	4-54	4-39	4-17	4-101	4-118	4-121	4-140	178-3	Acro anti-S1
IC50 [nM]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.58

FIG. 21C

**FIG. 21D**

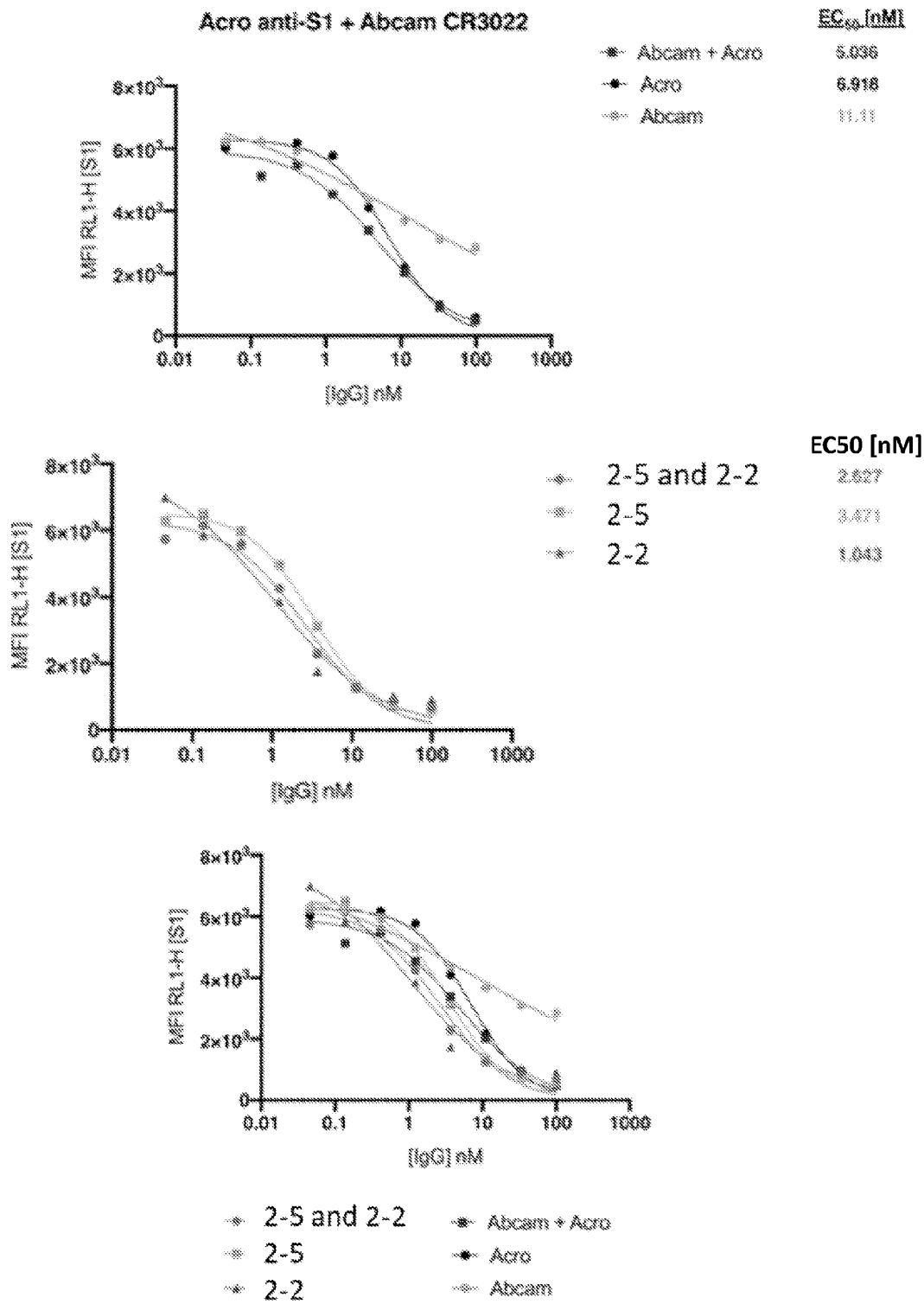


FIG. 22A

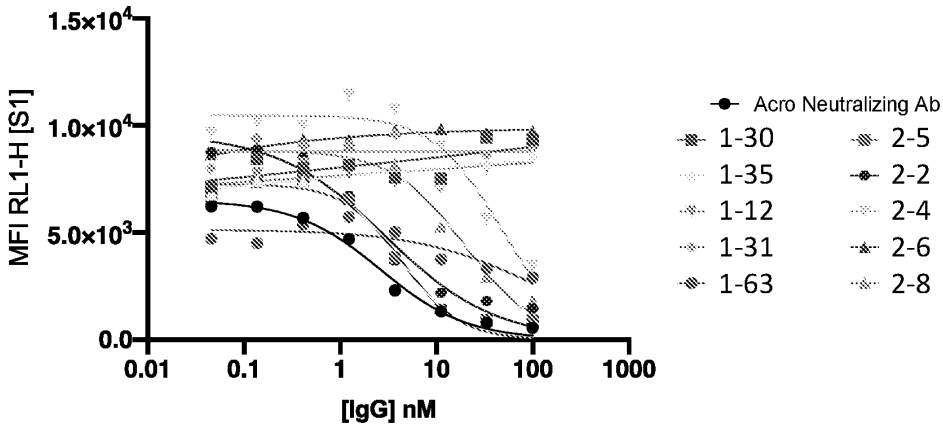


FIG. 22B

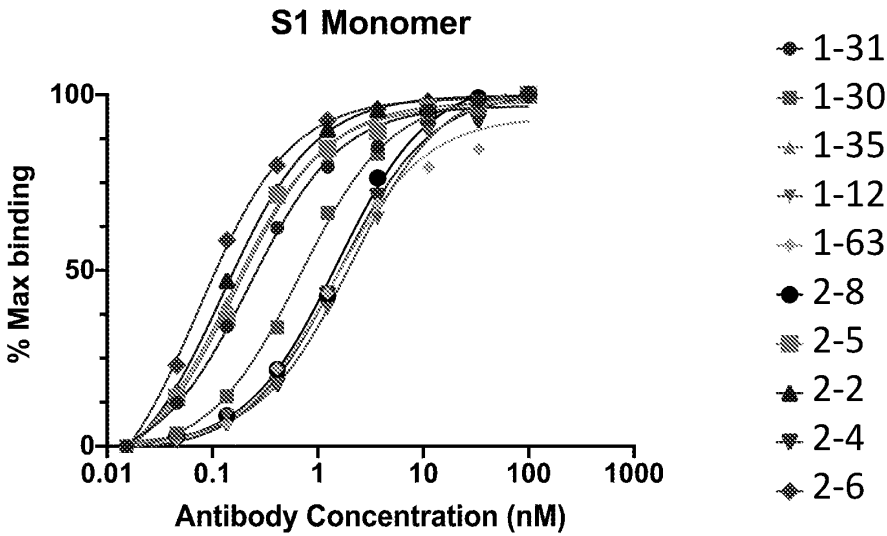


FIG. 22C

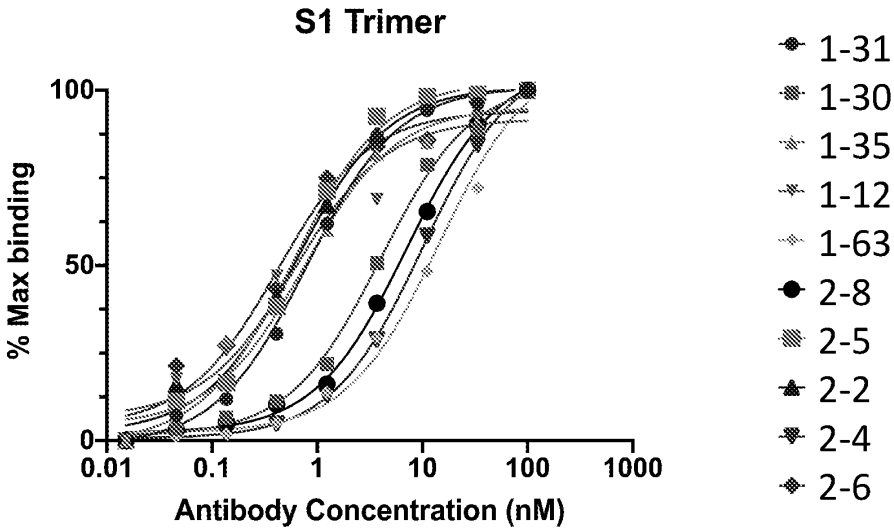


FIG. 22D

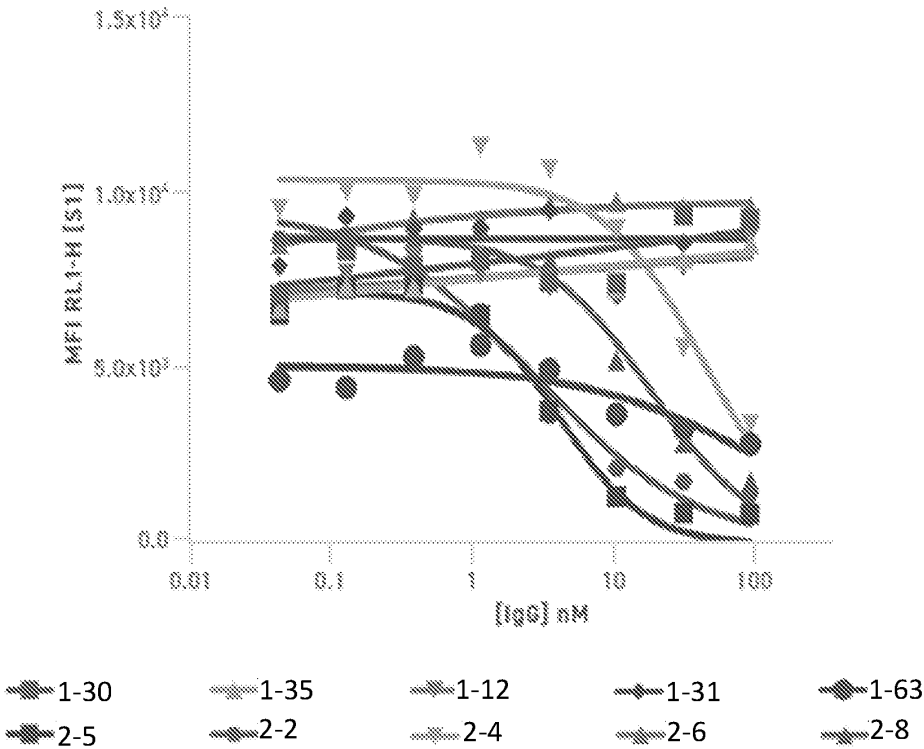


FIG. 22E

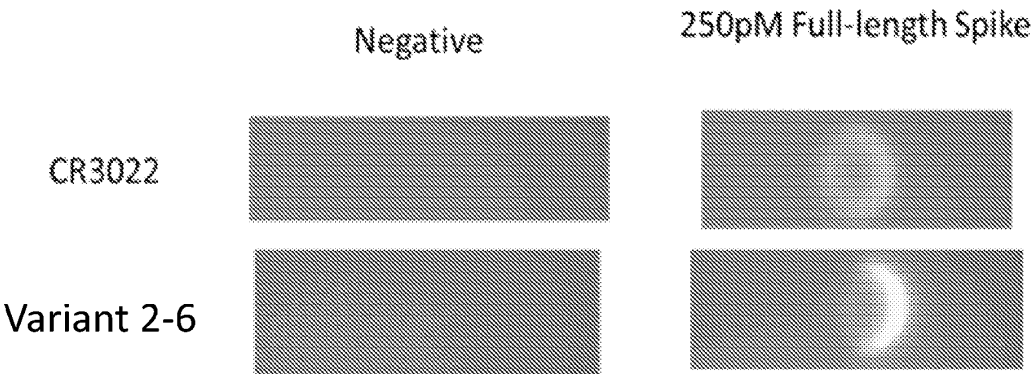


FIG. 23

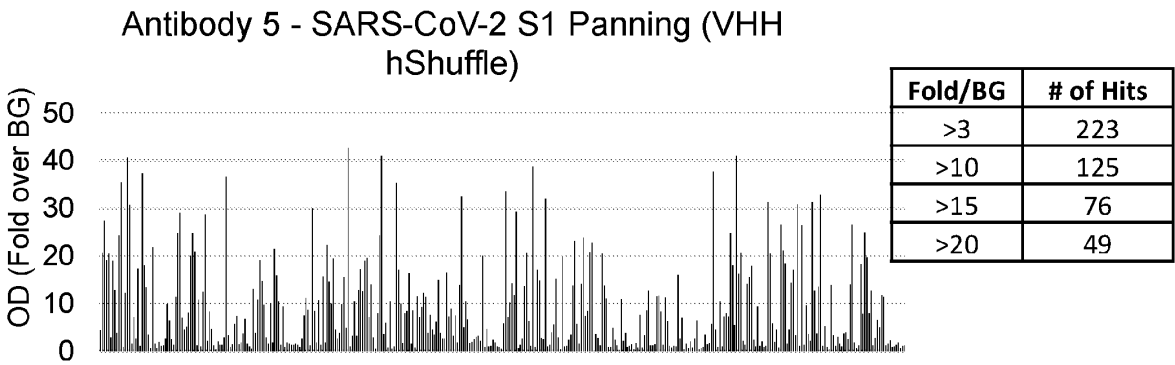


FIG. 24A

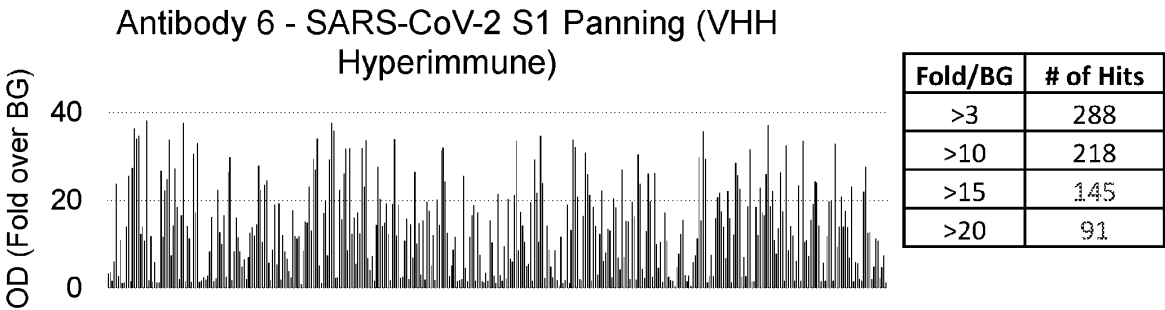


FIG. 24B

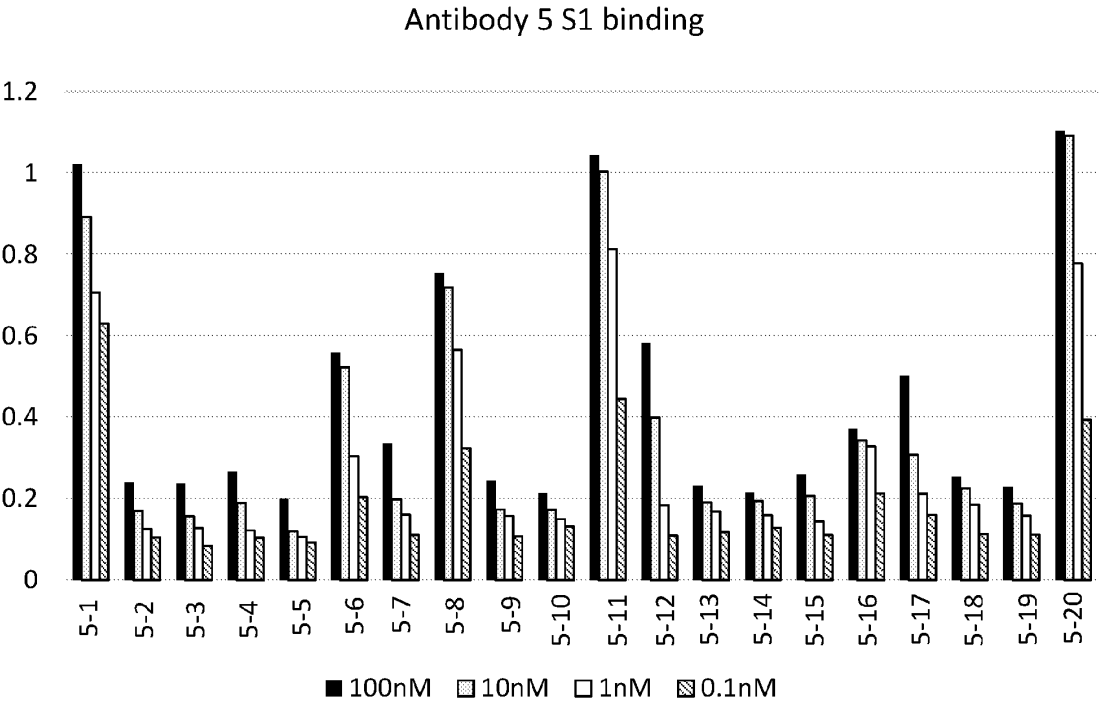


FIG. 25A

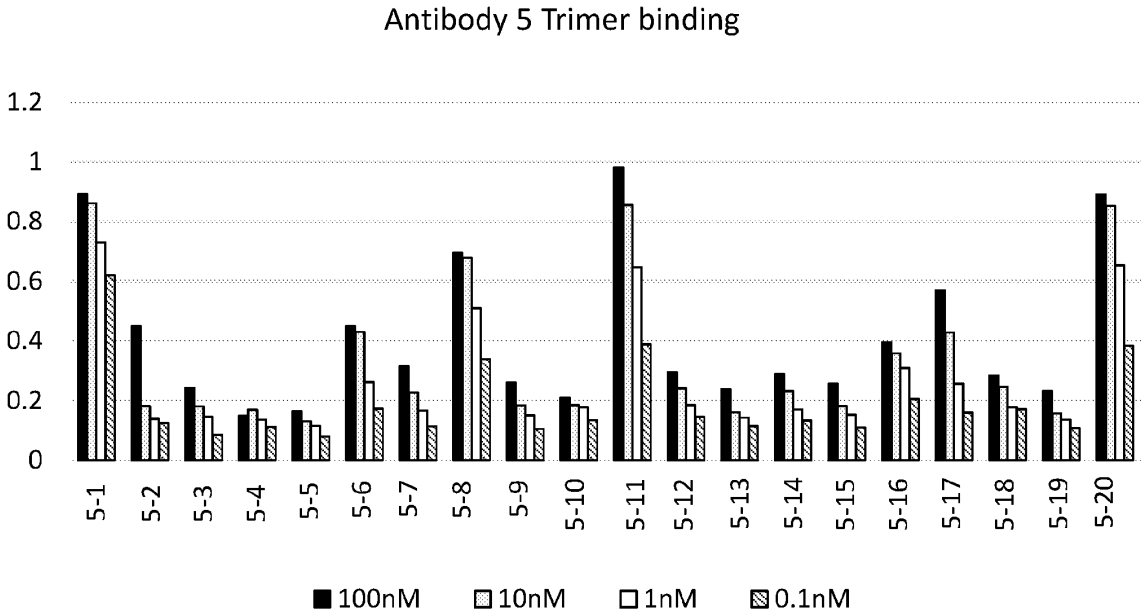


FIG. 25B

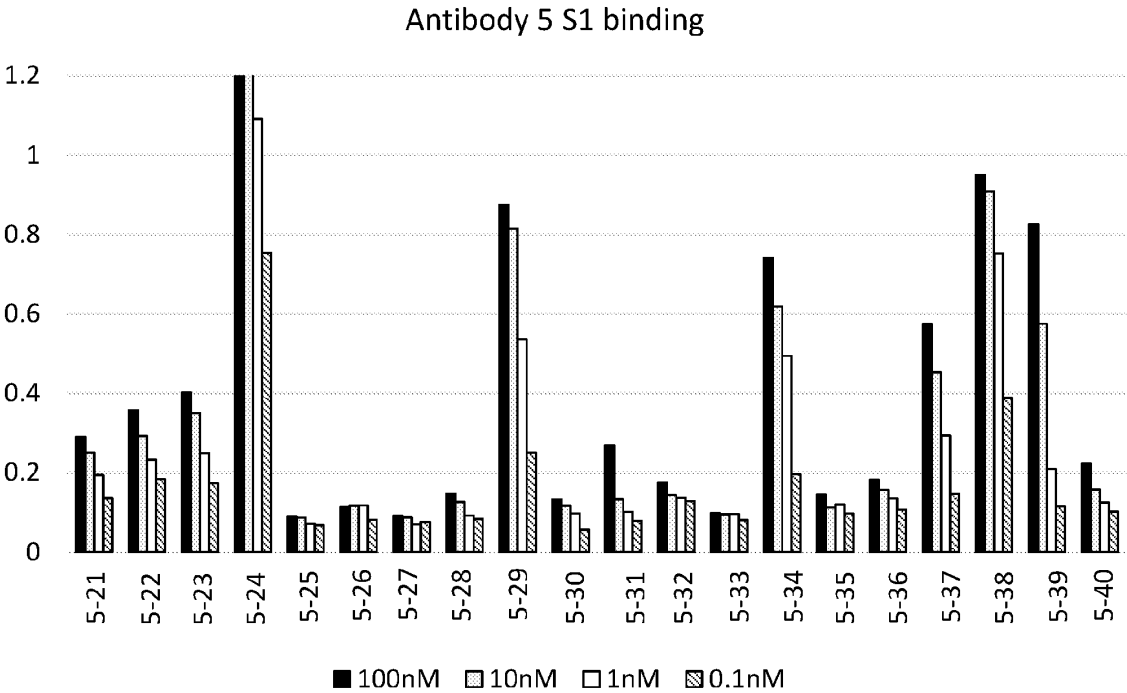


FIG. 25C

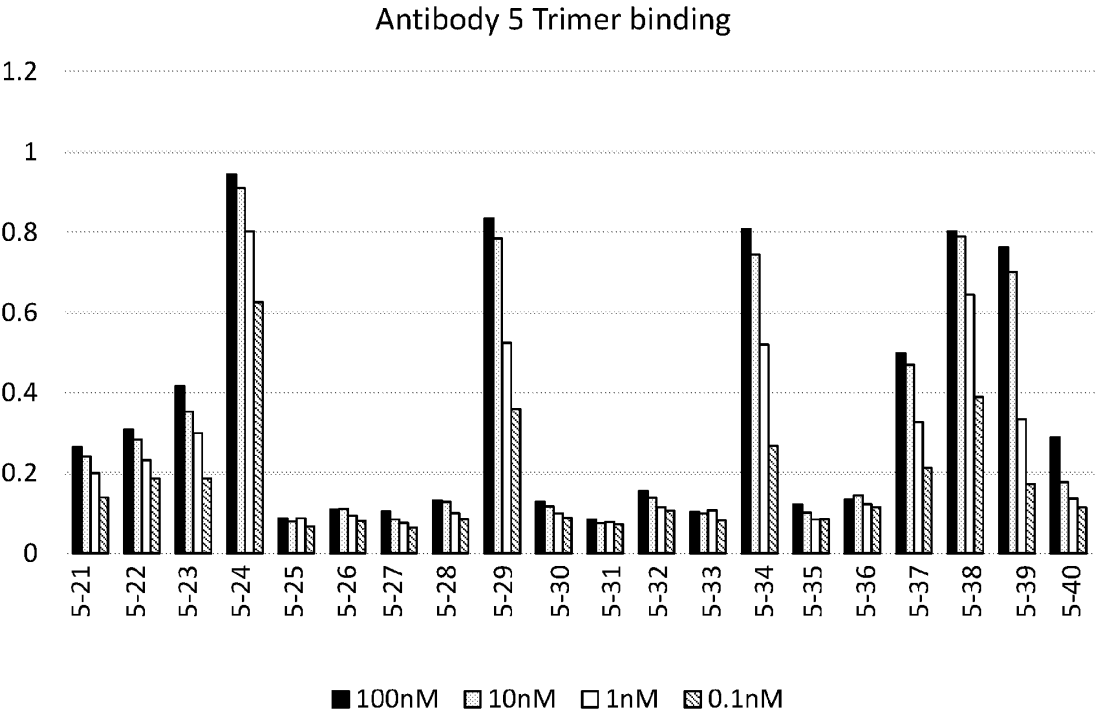


FIG. 25D

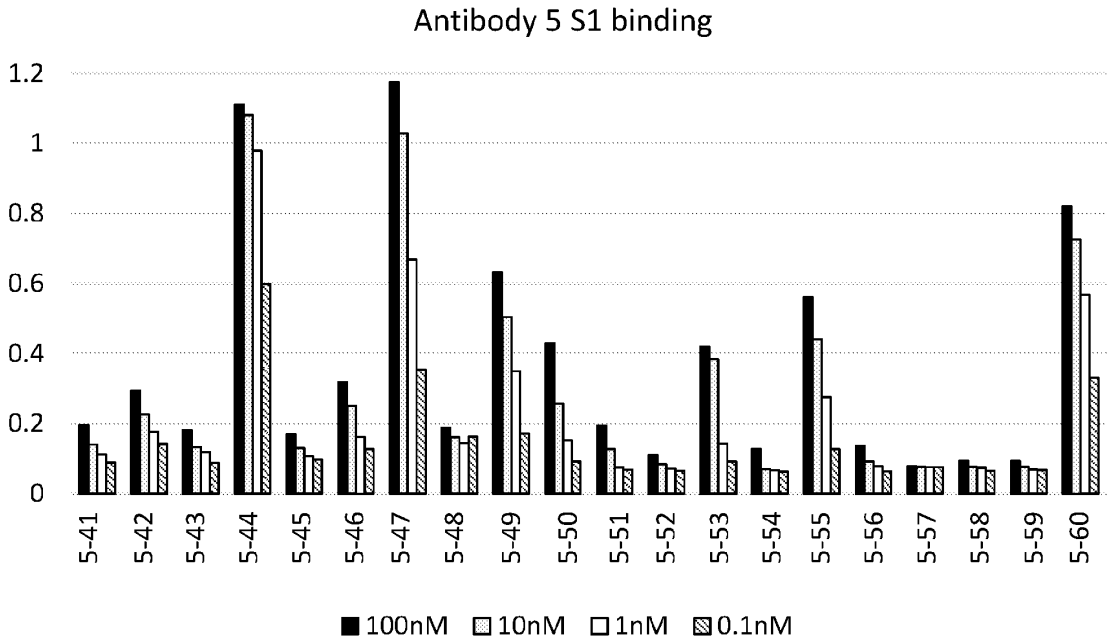


FIG. 25E

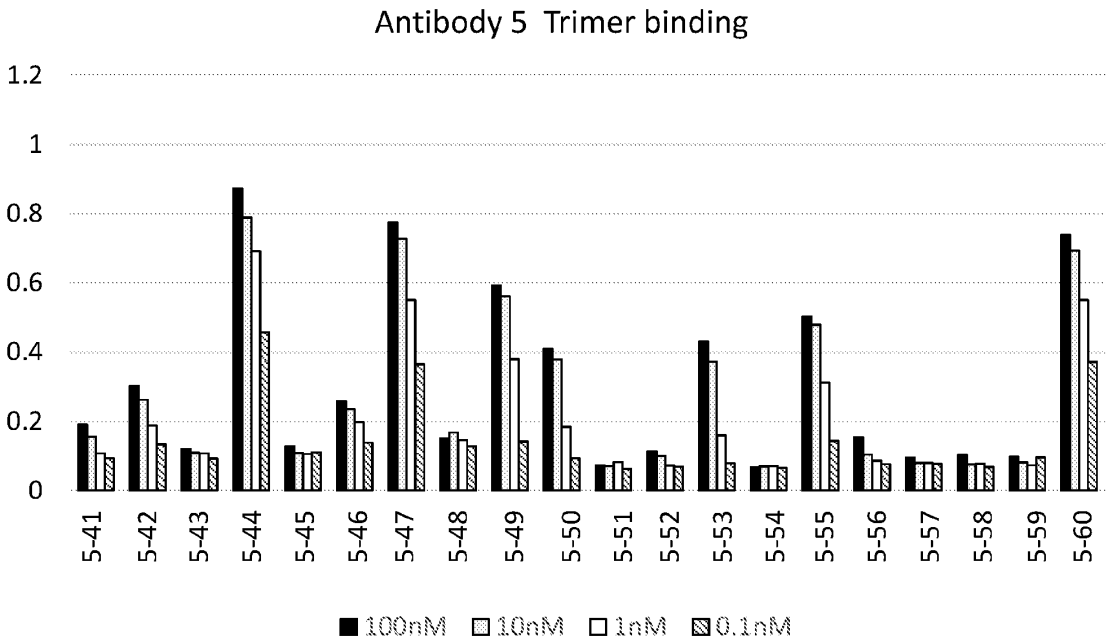


FIG. 25F

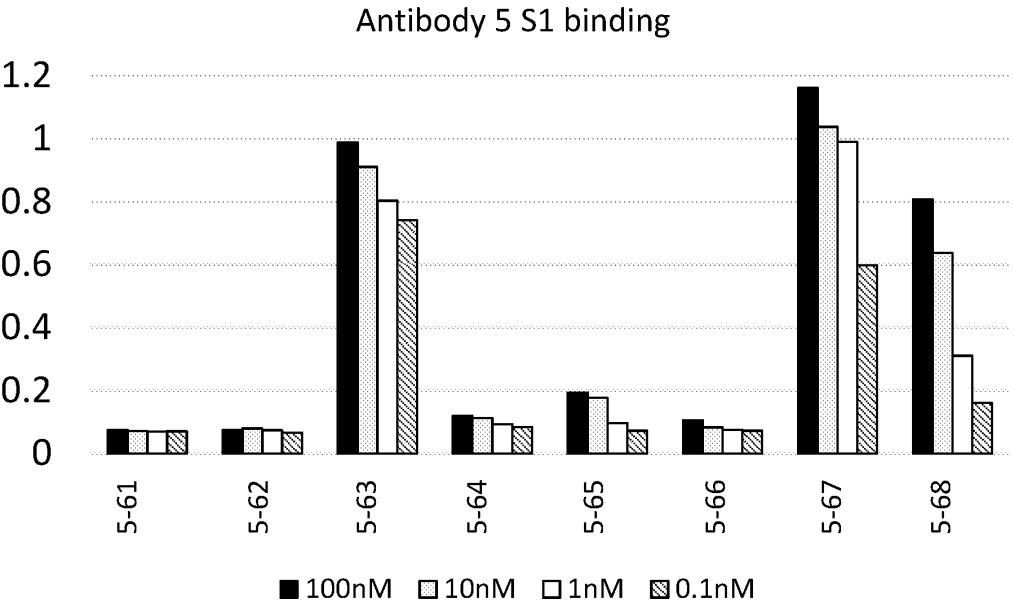


FIG. 25G

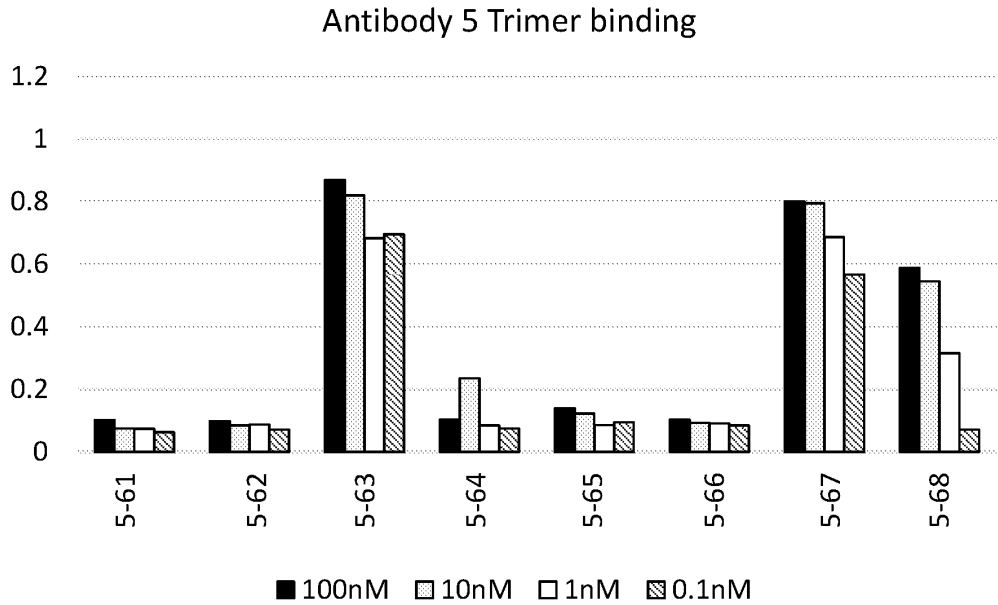


FIG. 25H

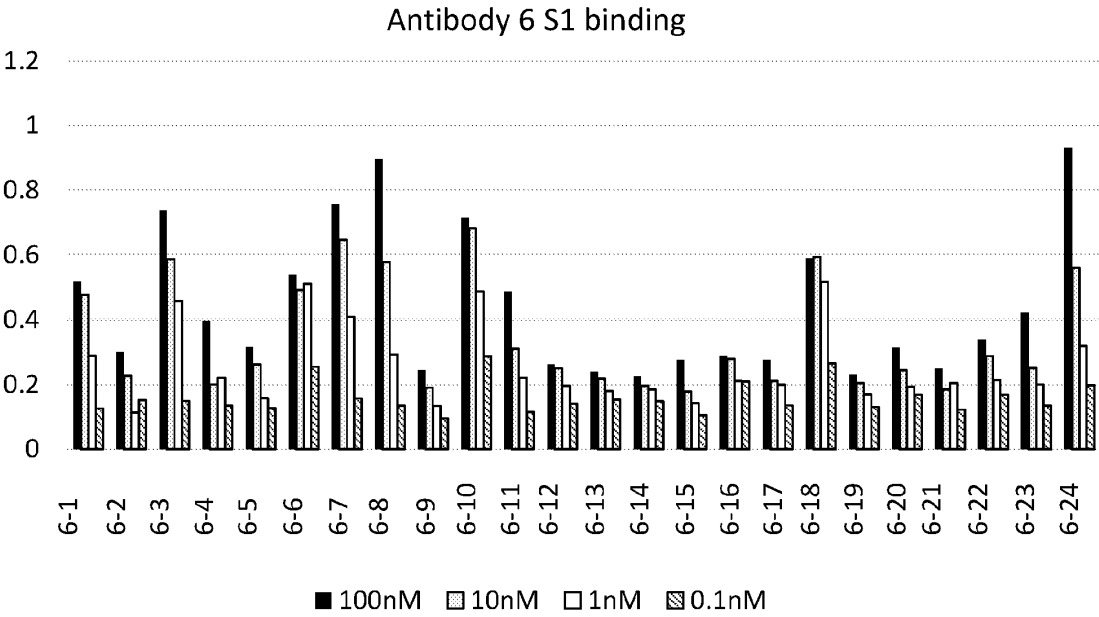


FIG. 26A

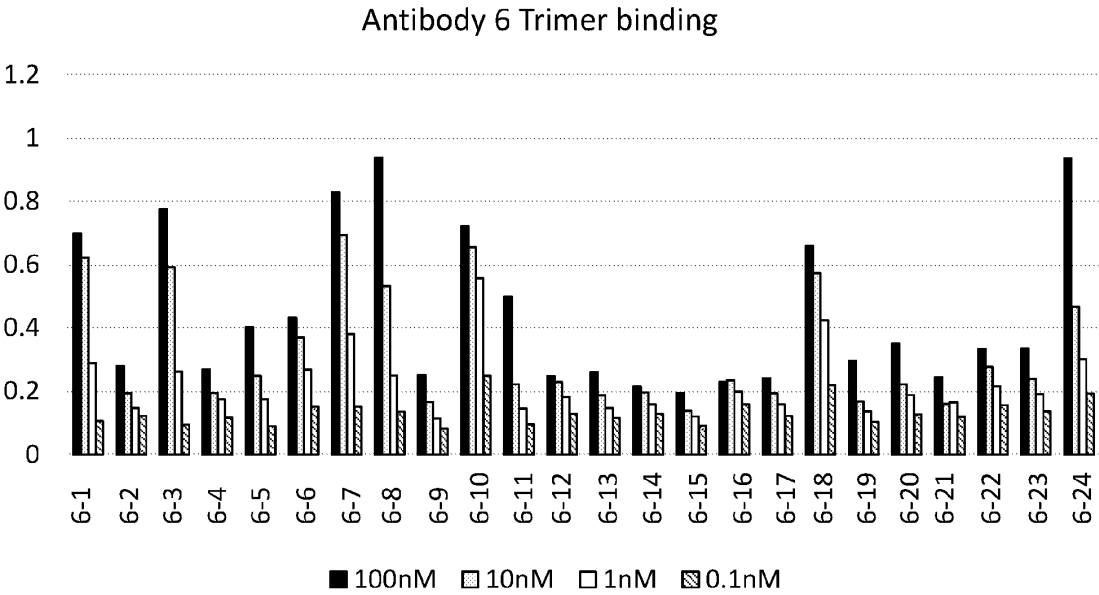


FIG. 26B

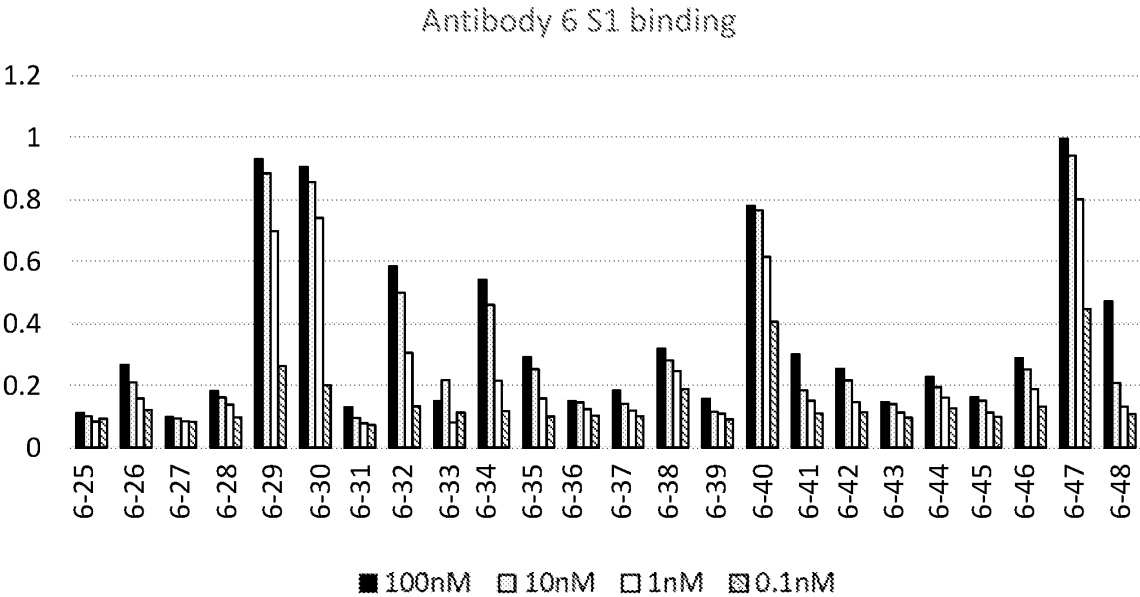


FIG. 26C

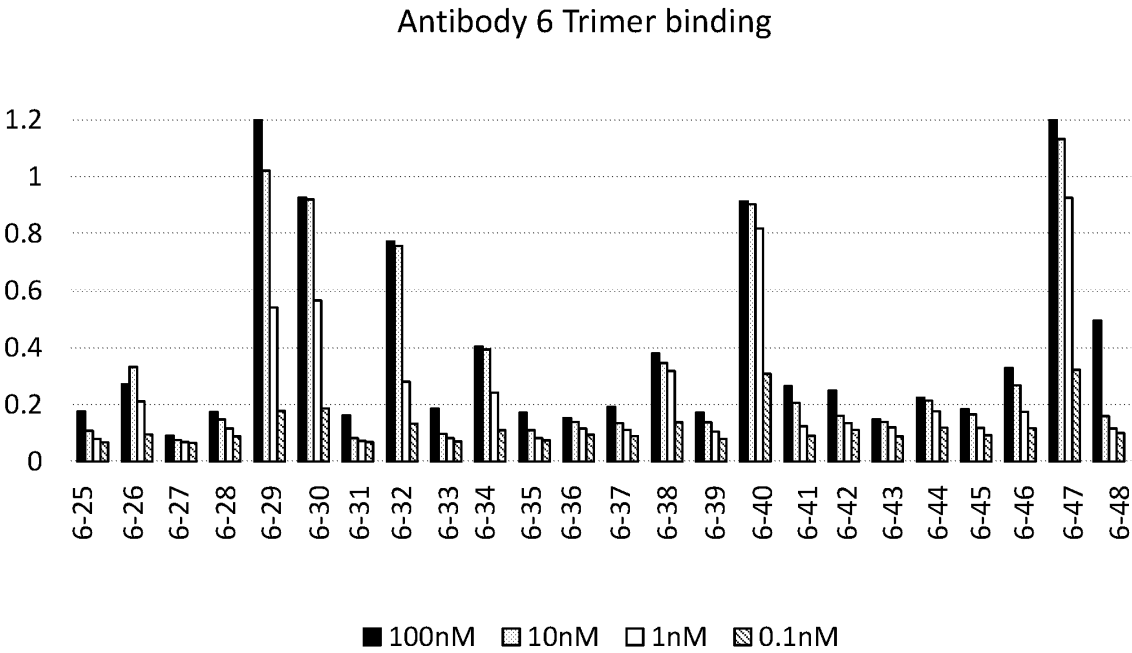
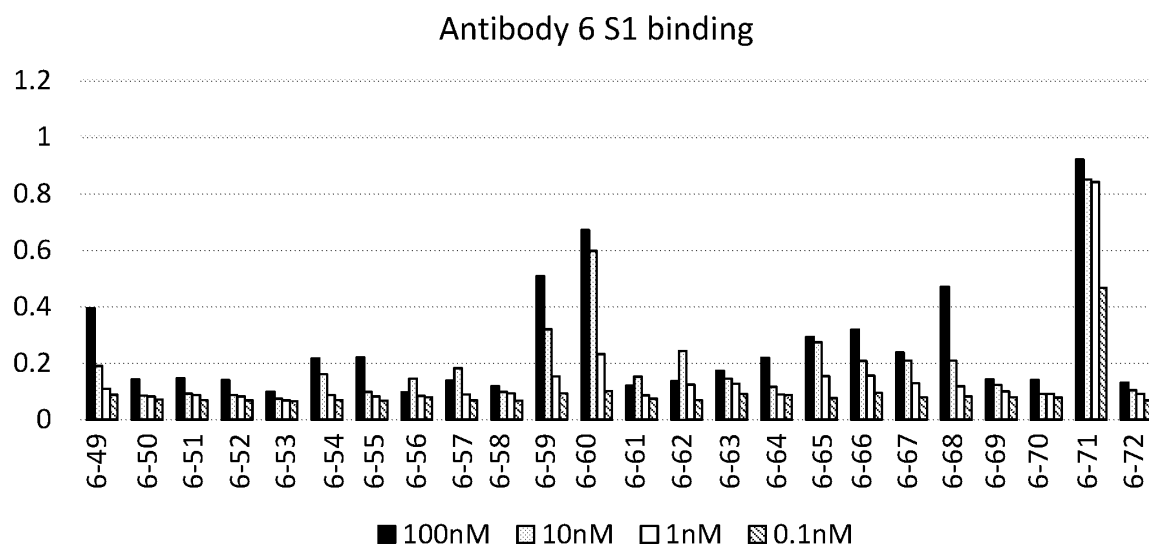
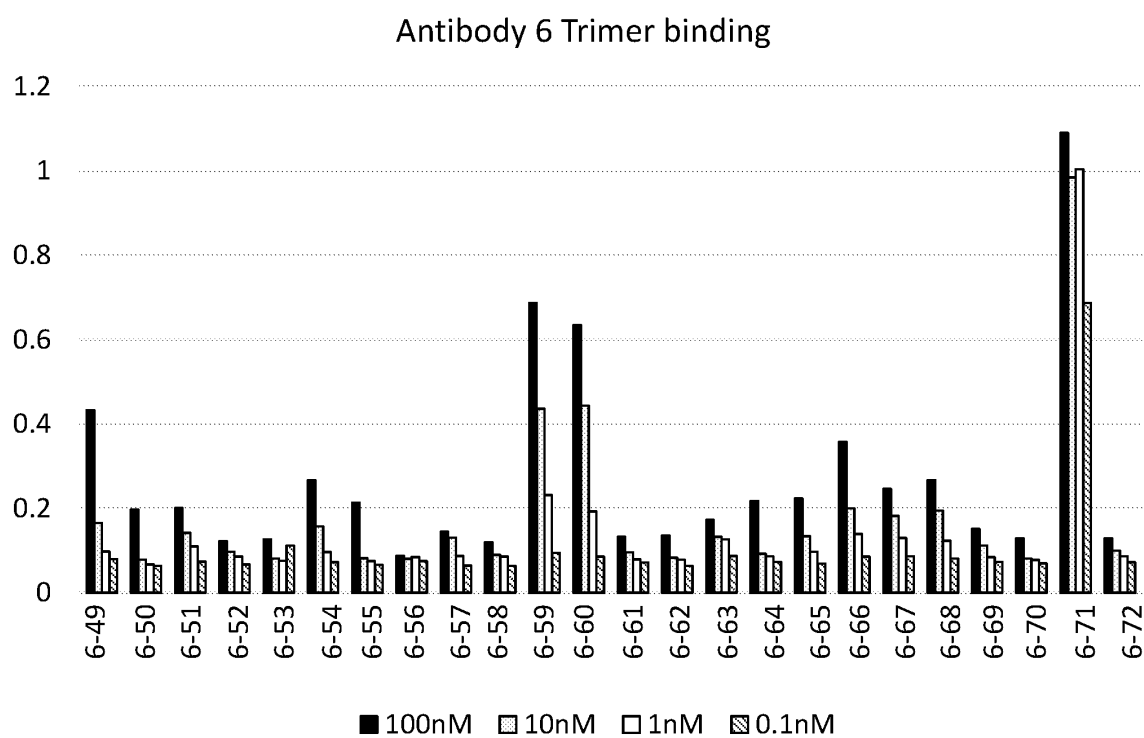


FIG. 26D

**FIG. 26E****FIG. 26F**

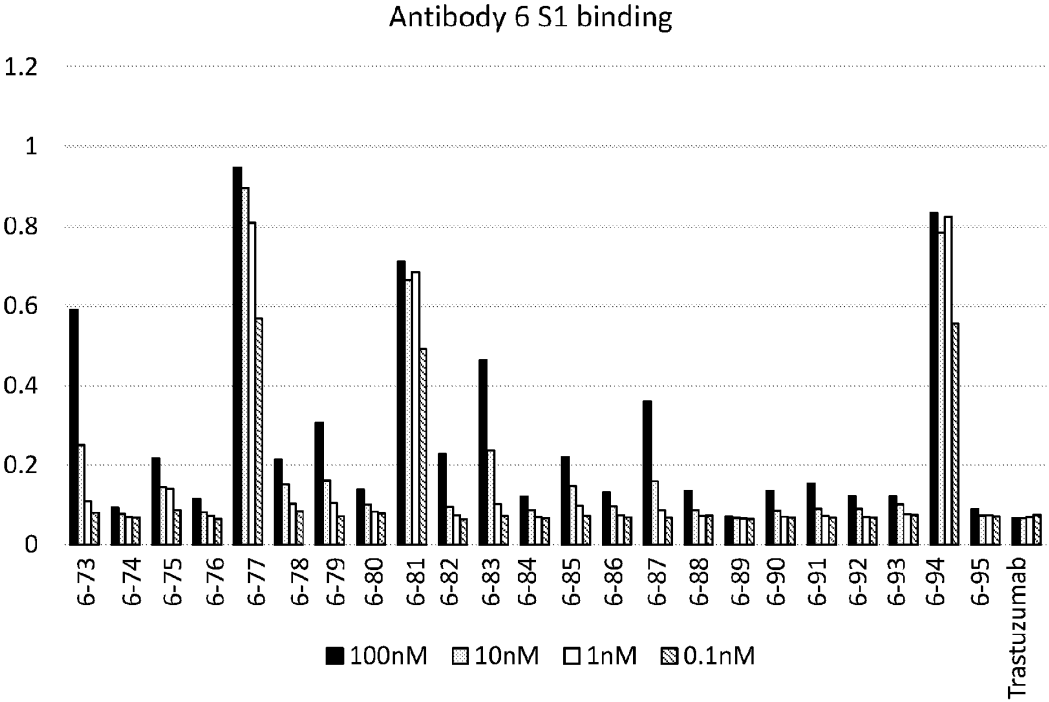


FIG. 26G

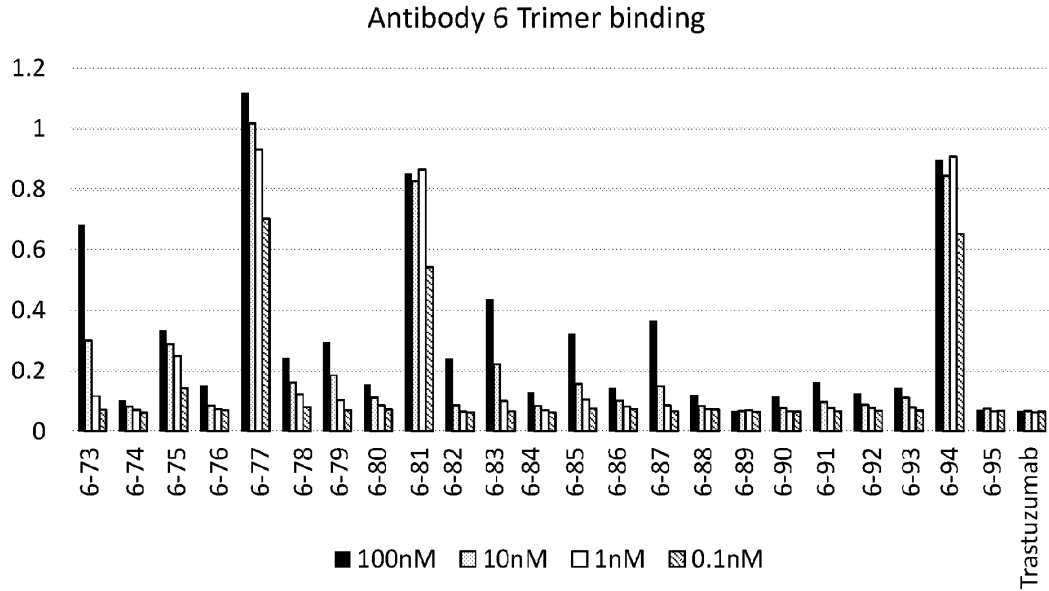


FIG. 26H

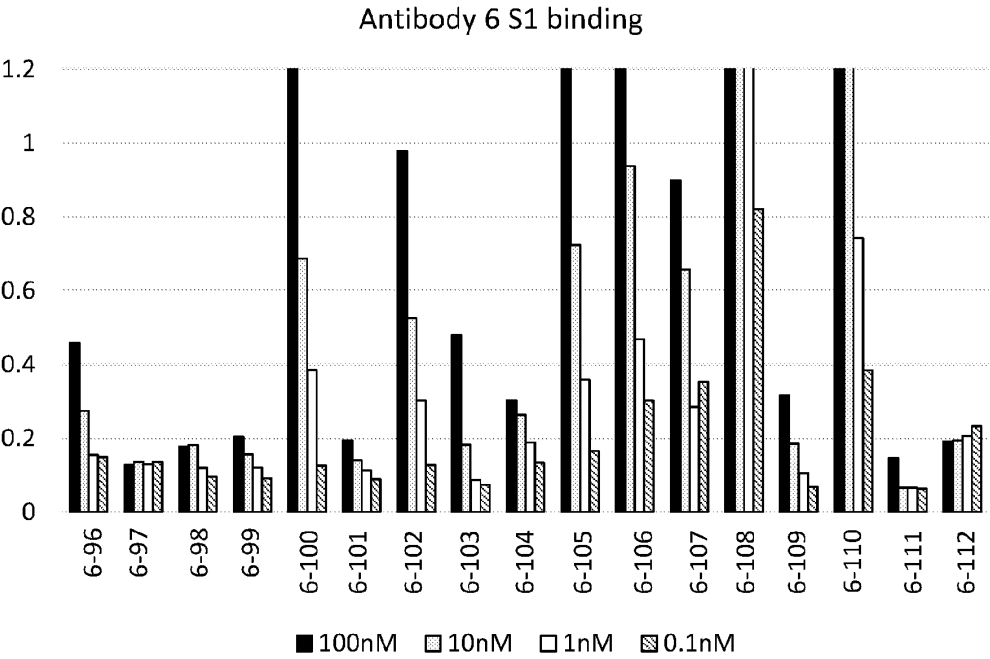


FIG. 26I

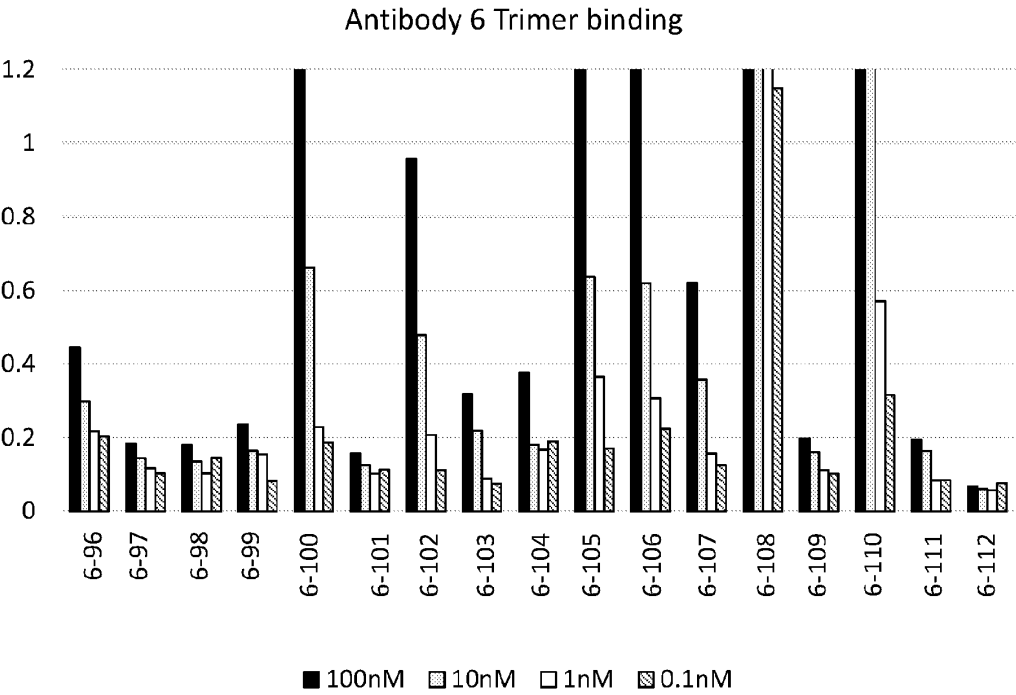


FIG. 26J

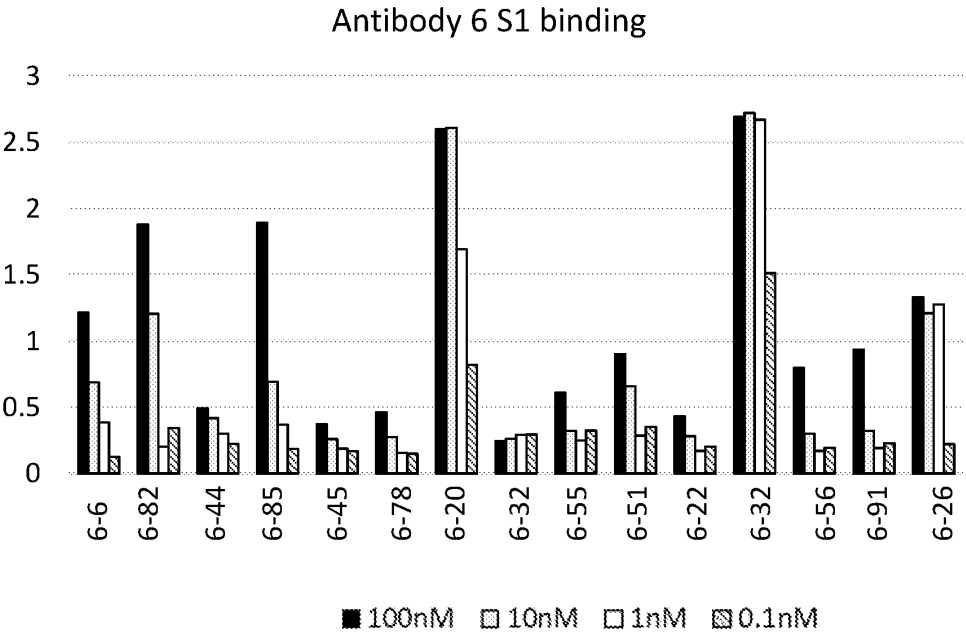


FIG. 27A

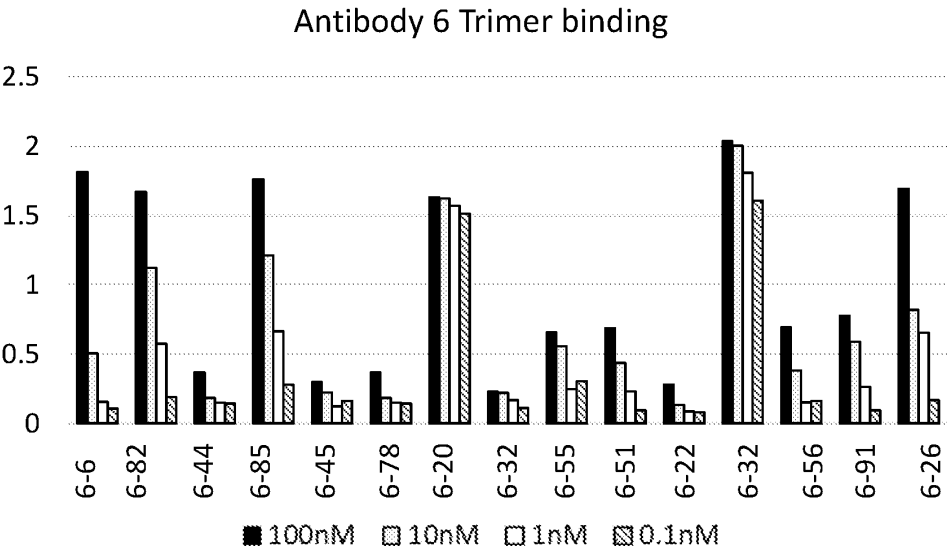


FIG. 27B

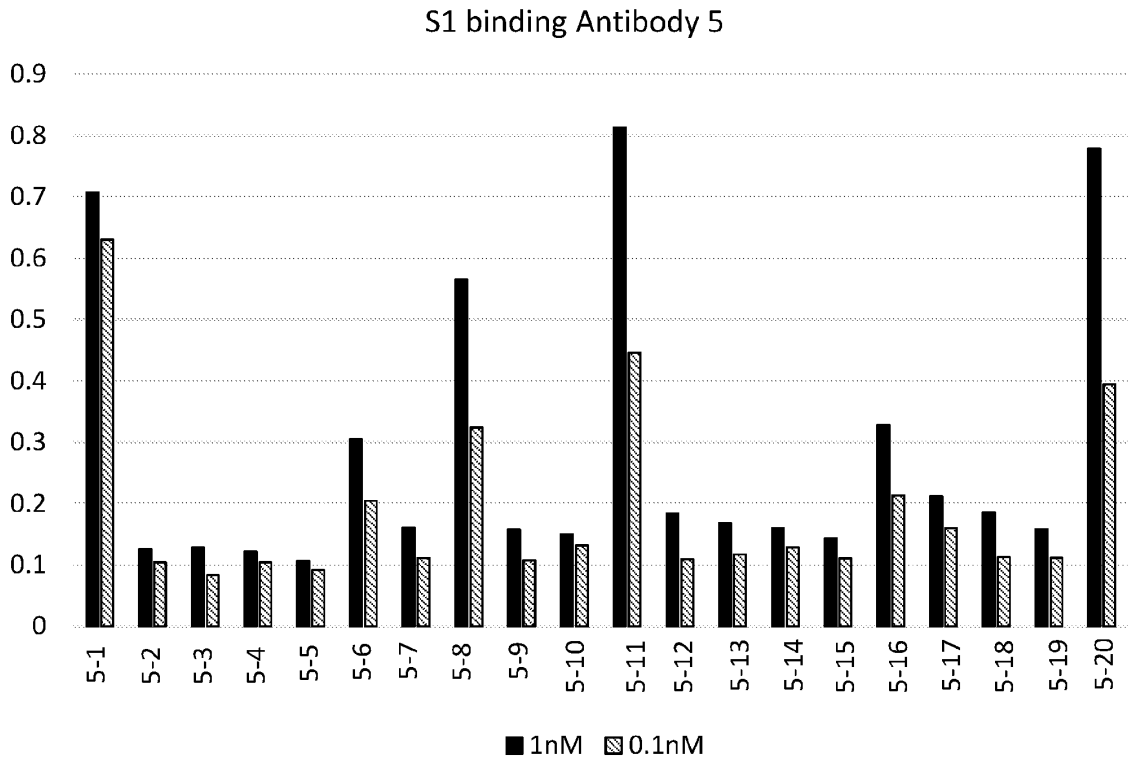


FIG. 28A

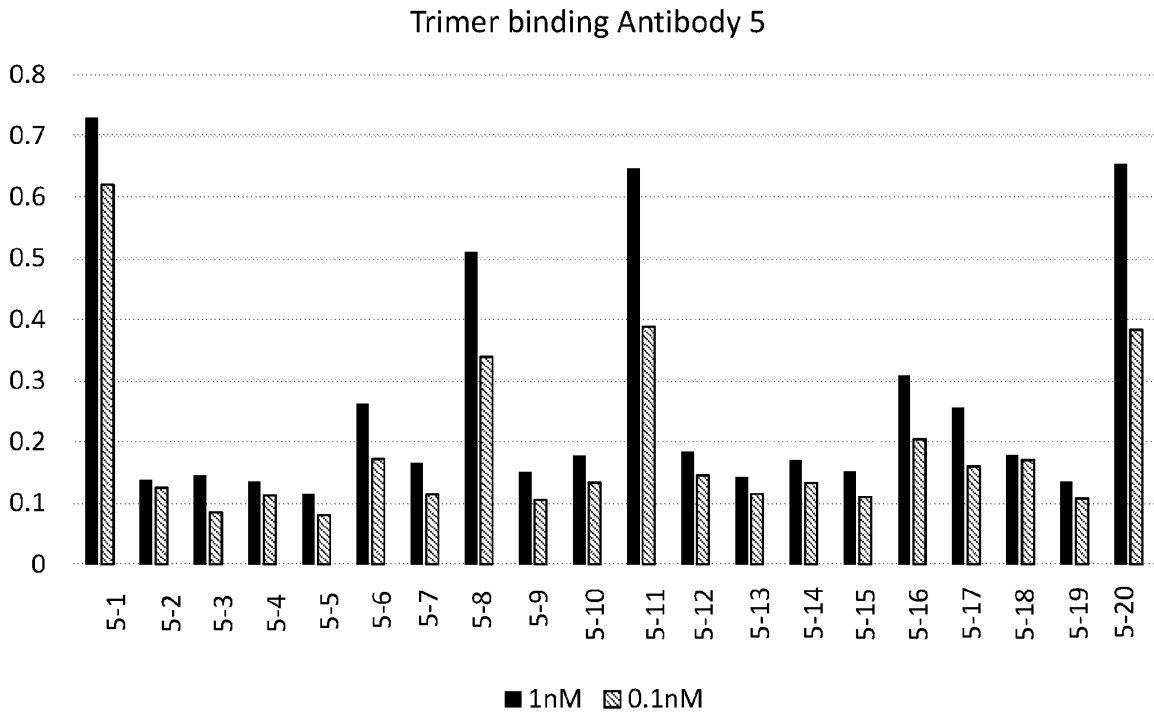
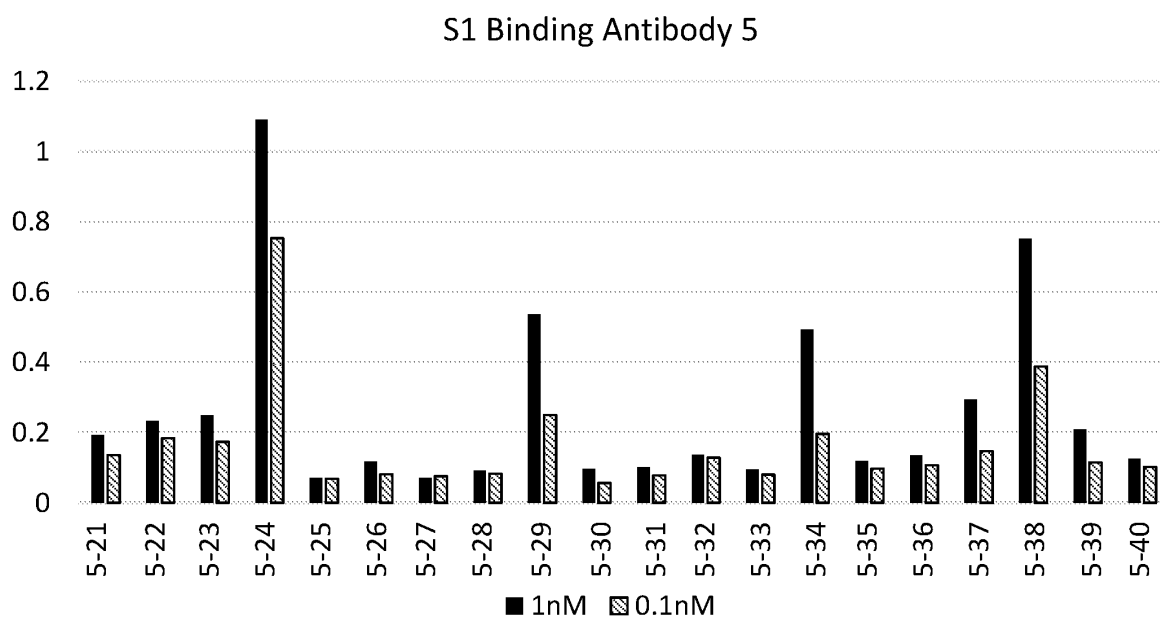
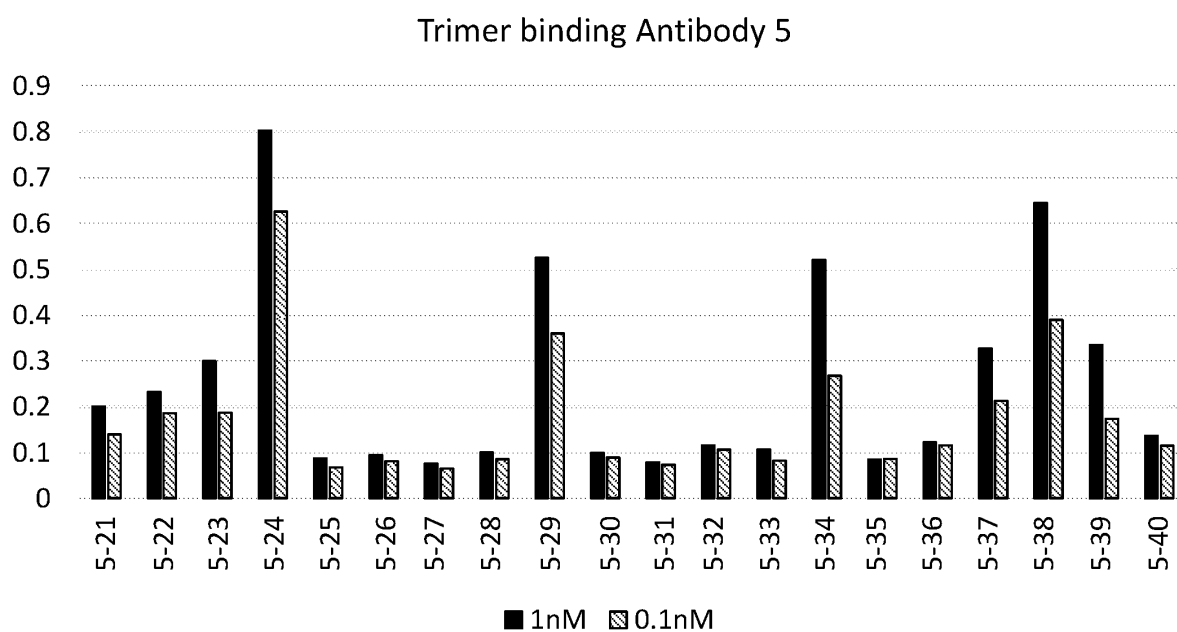


FIG. 28B

**FIG. 28C****FIG. 28D**

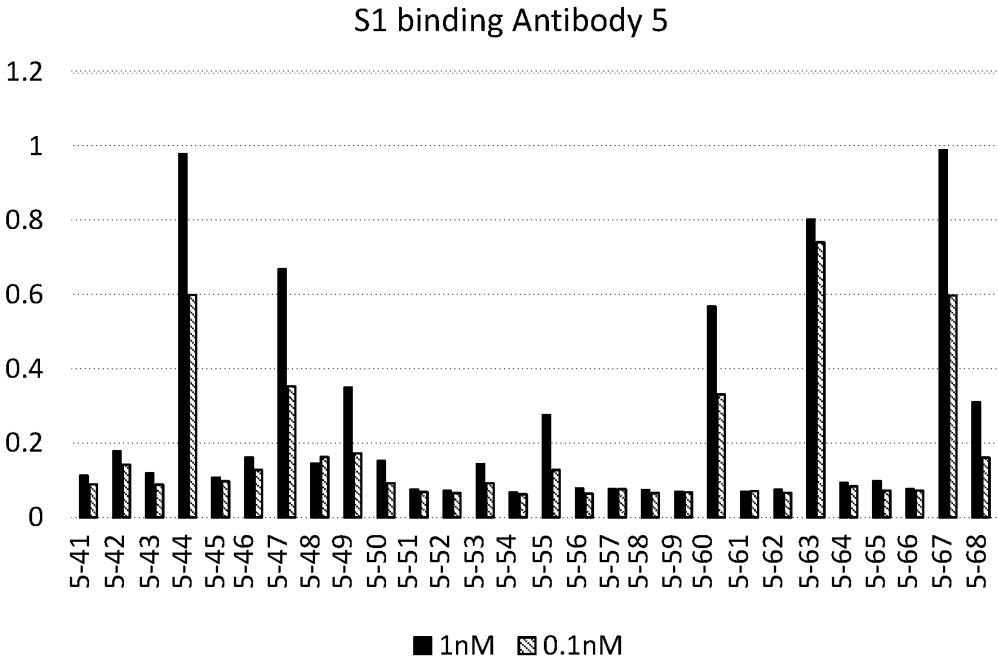


FIG. 28E

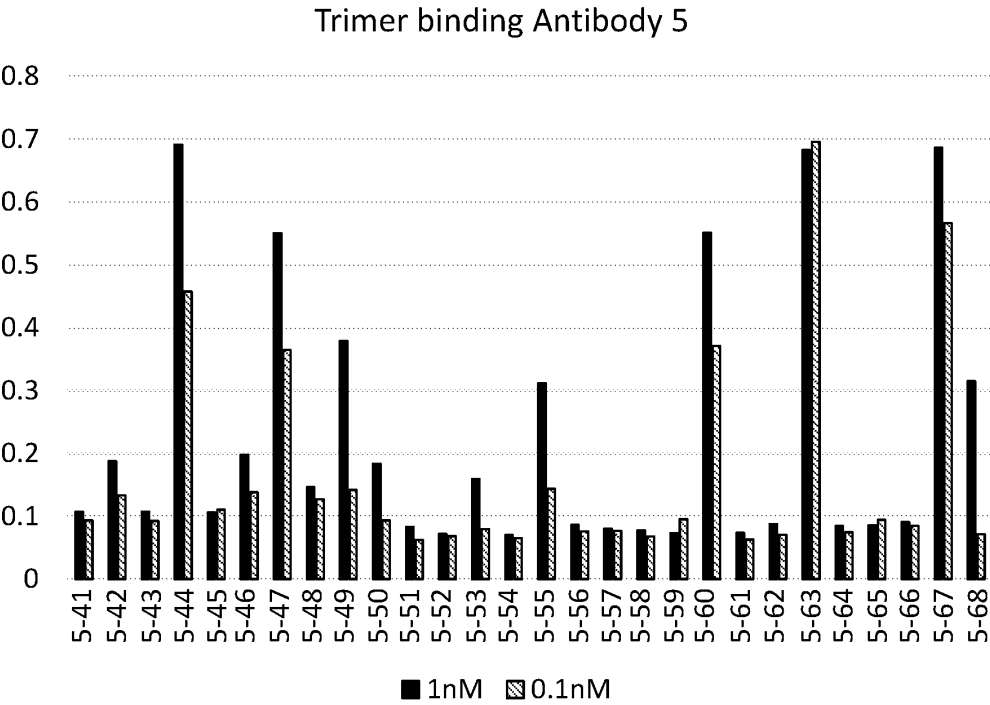


FIG. 28F

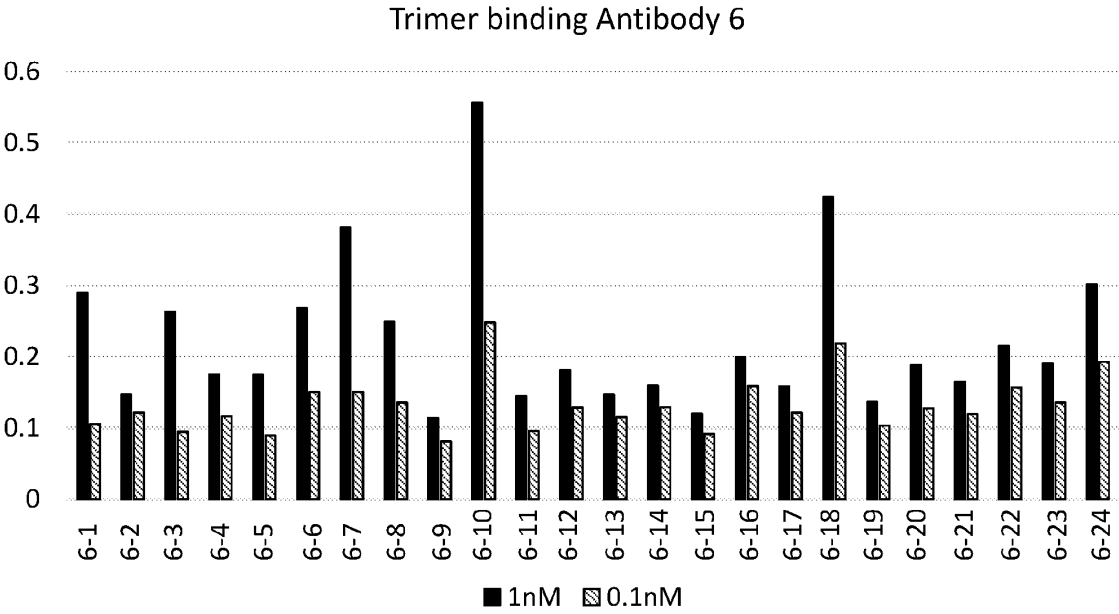


FIG. 29A

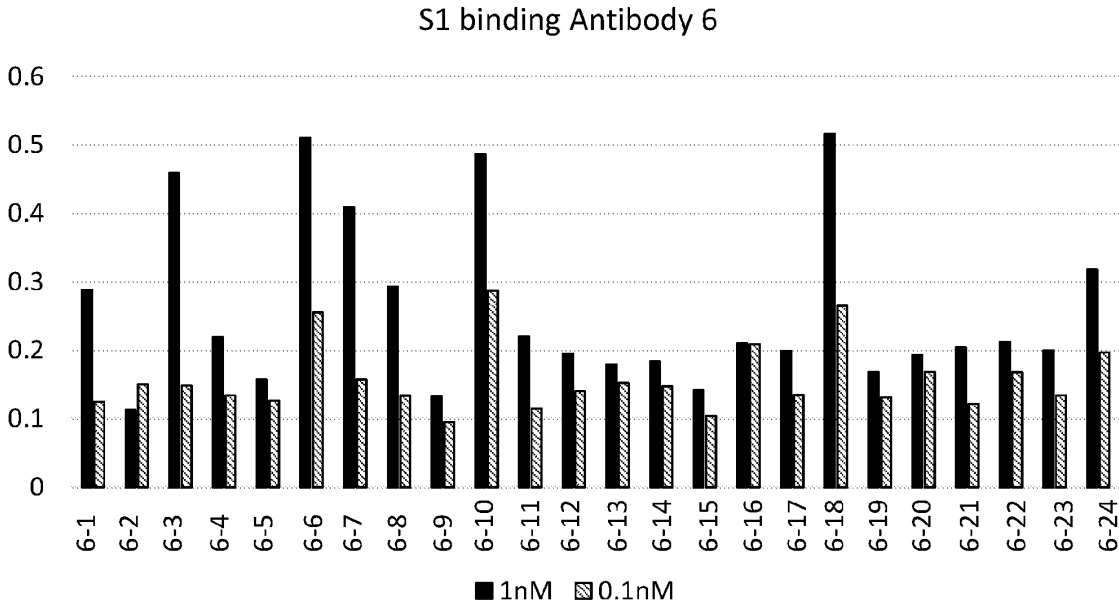


FIG. 29B

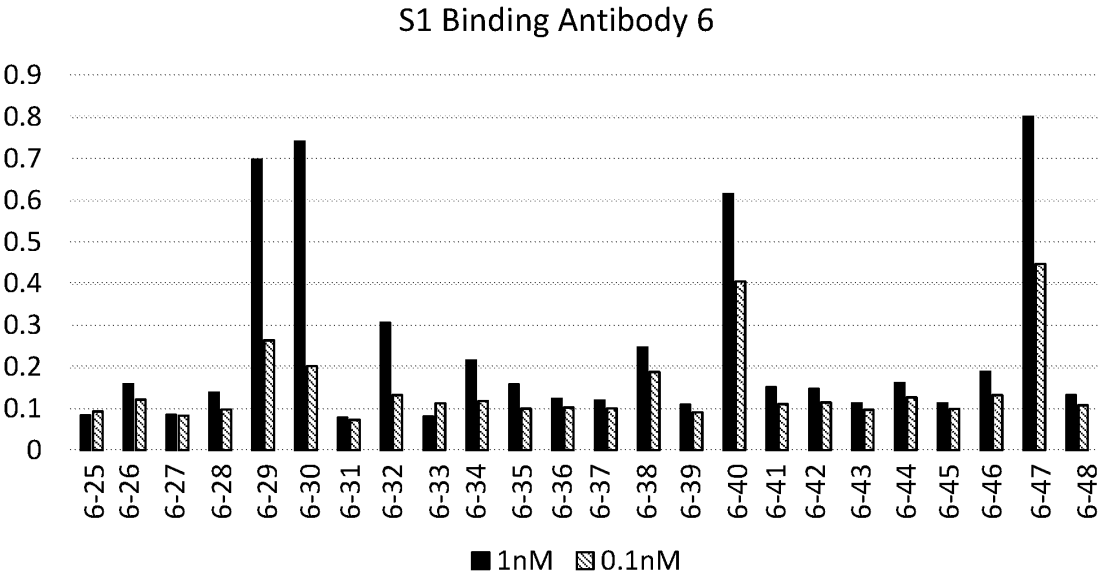


FIG. 29C

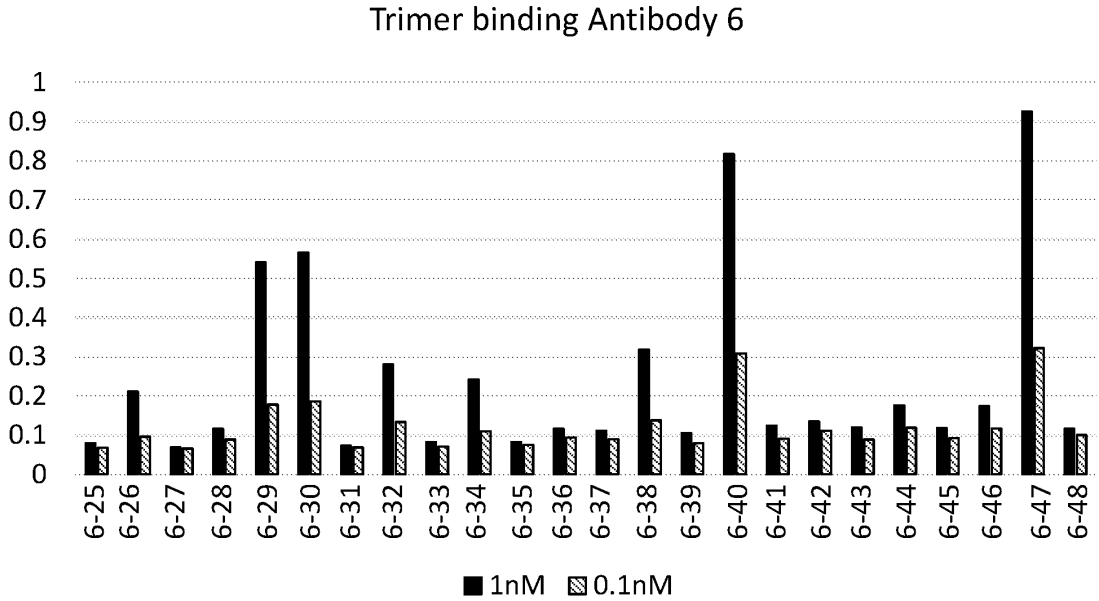


FIG. 29D

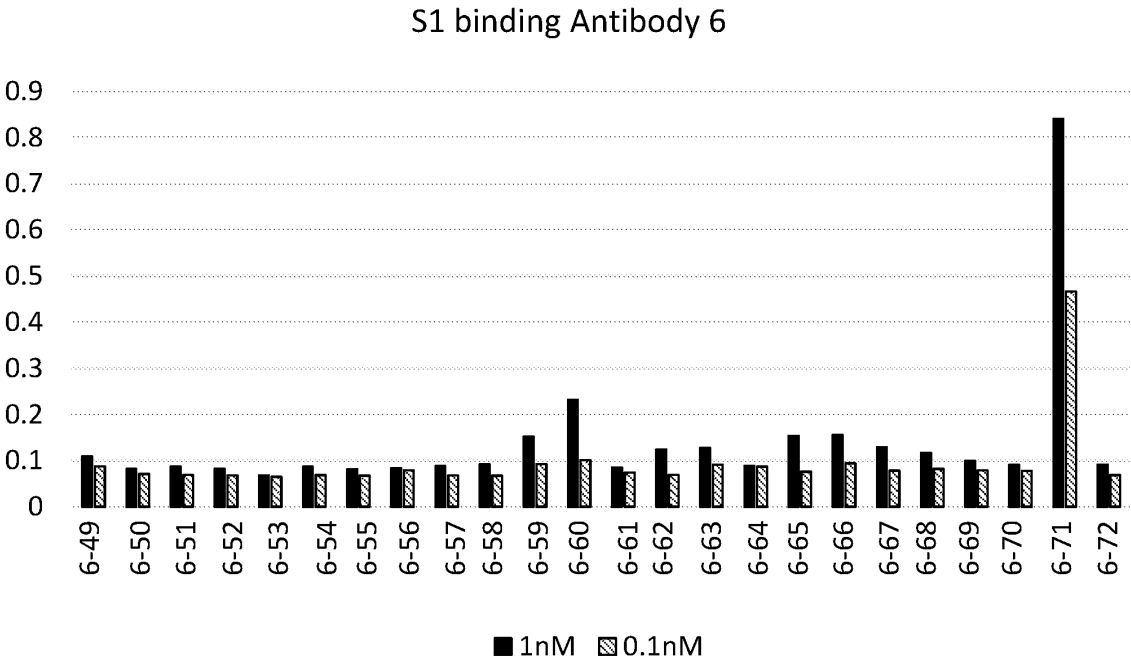


FIG. 29E

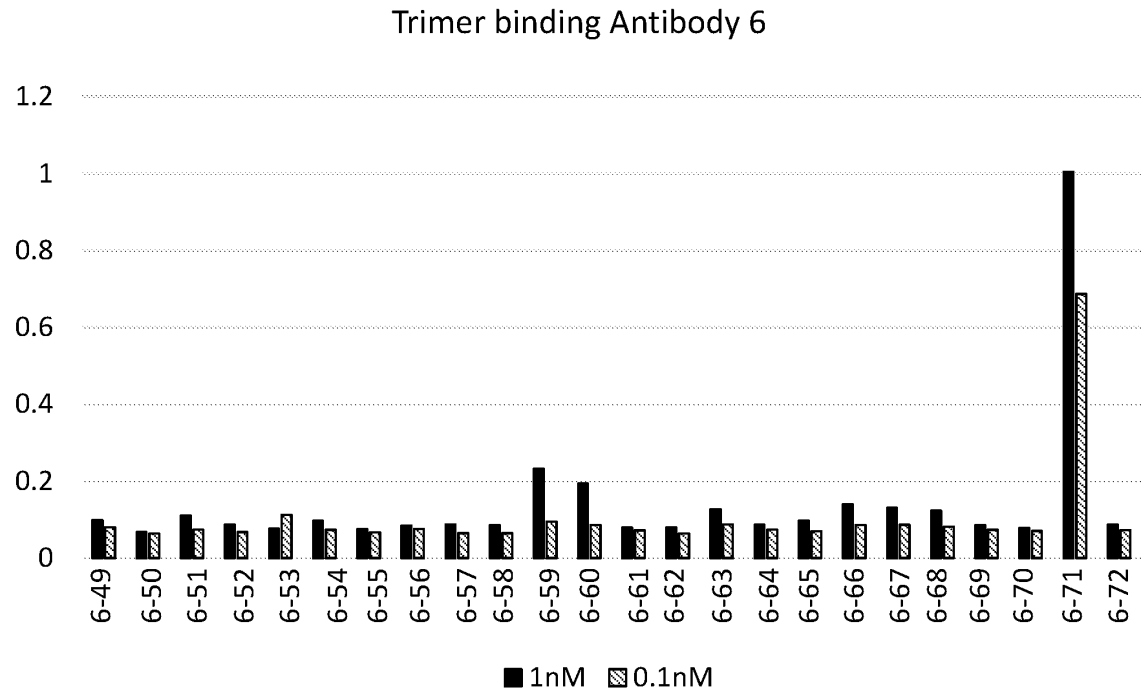


FIG. 29F

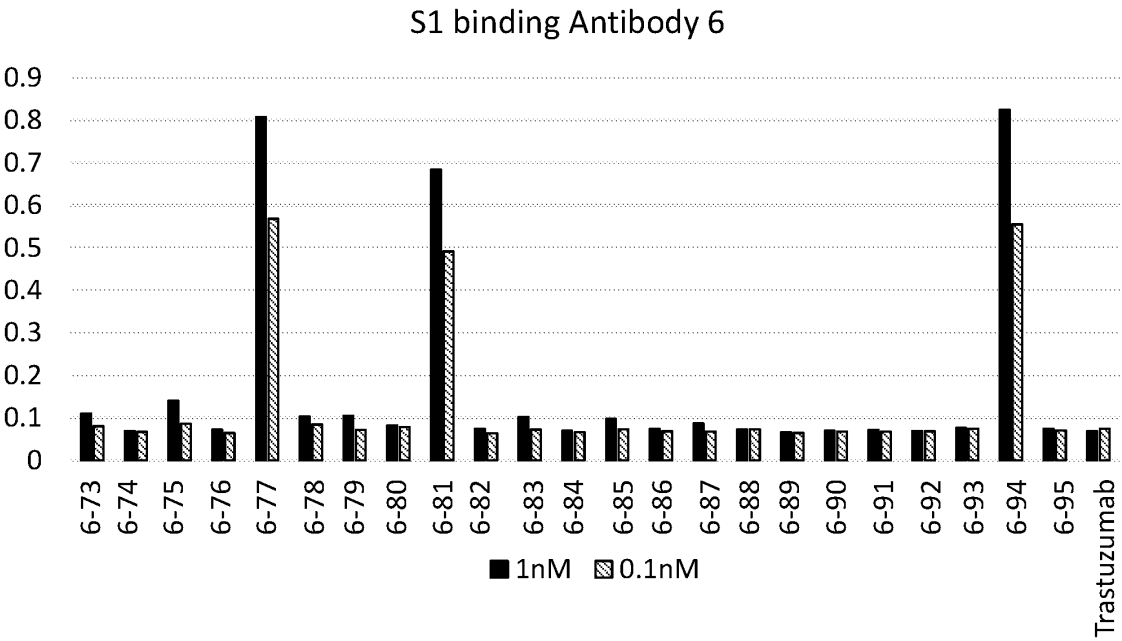


FIG. 29G

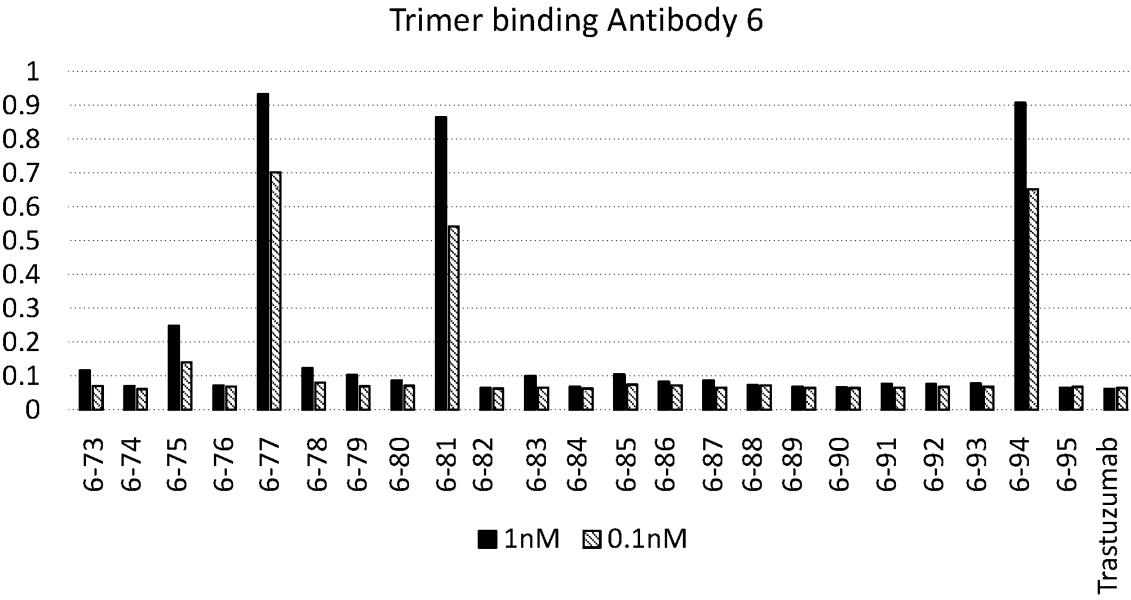


FIG. 29H

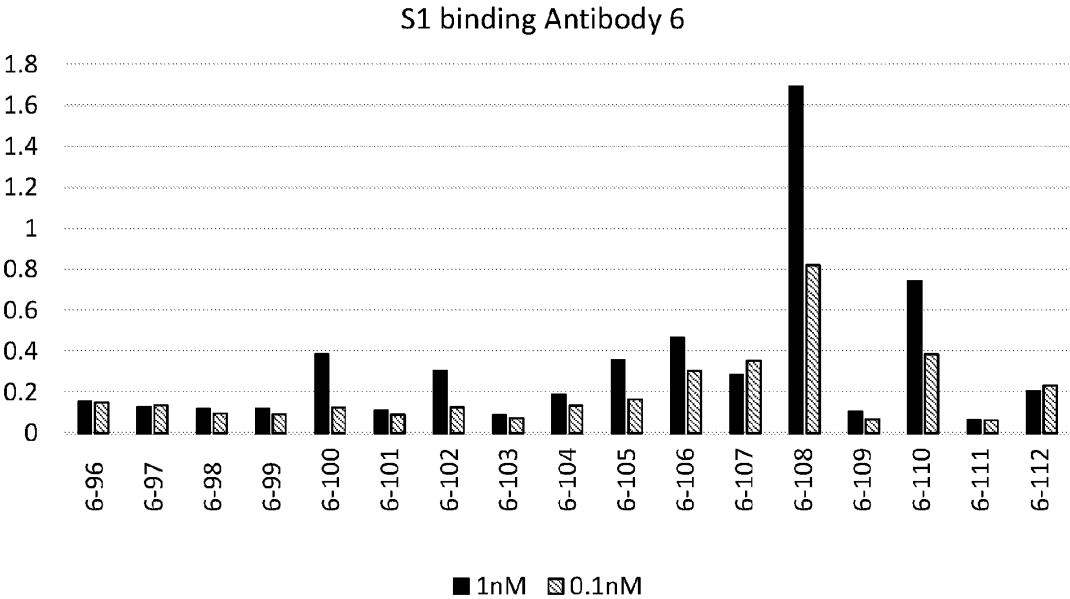


FIG. 29I

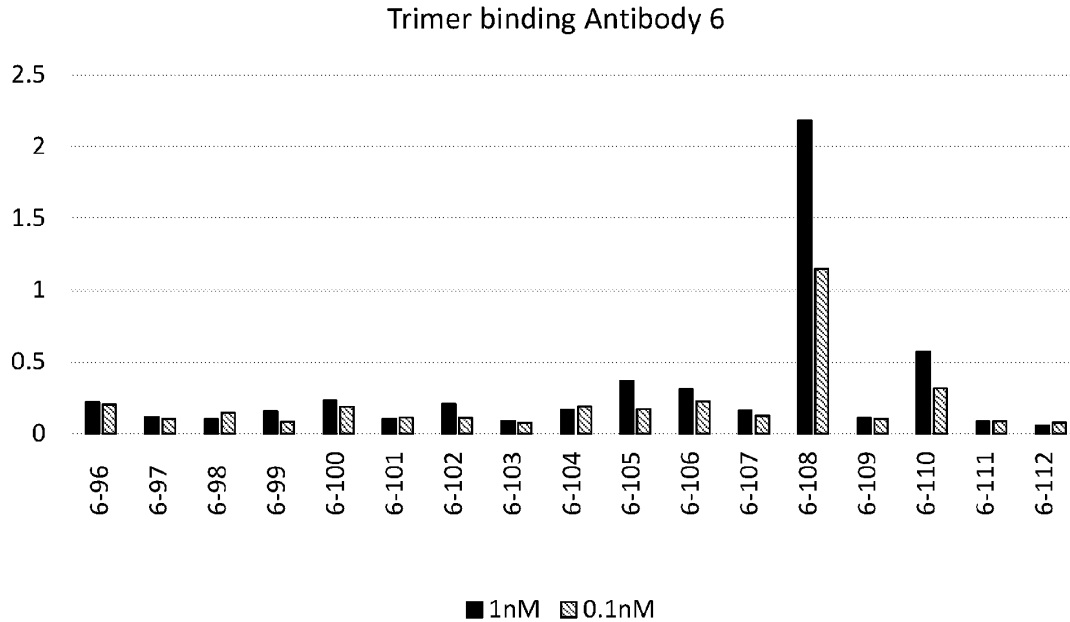


FIG. 29J

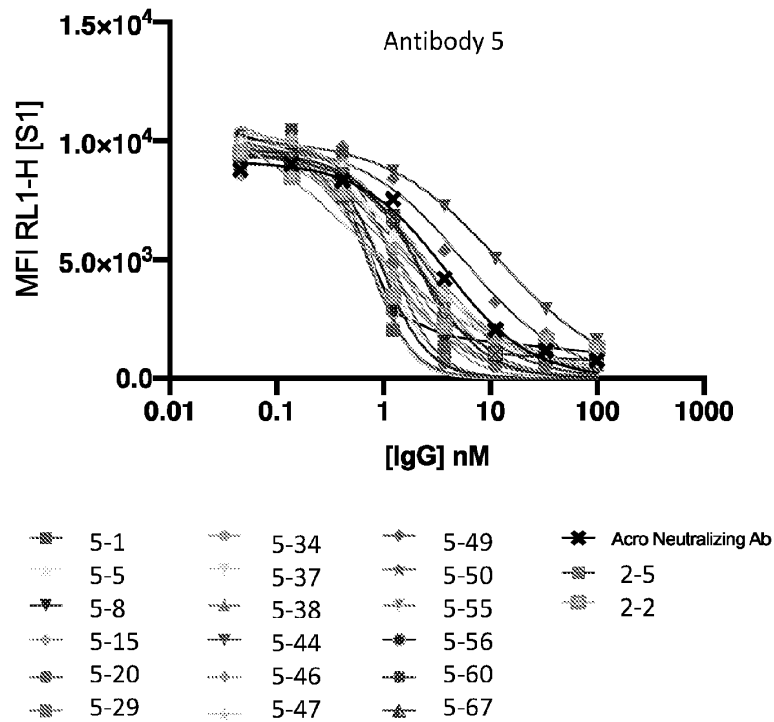


FIG. 30A

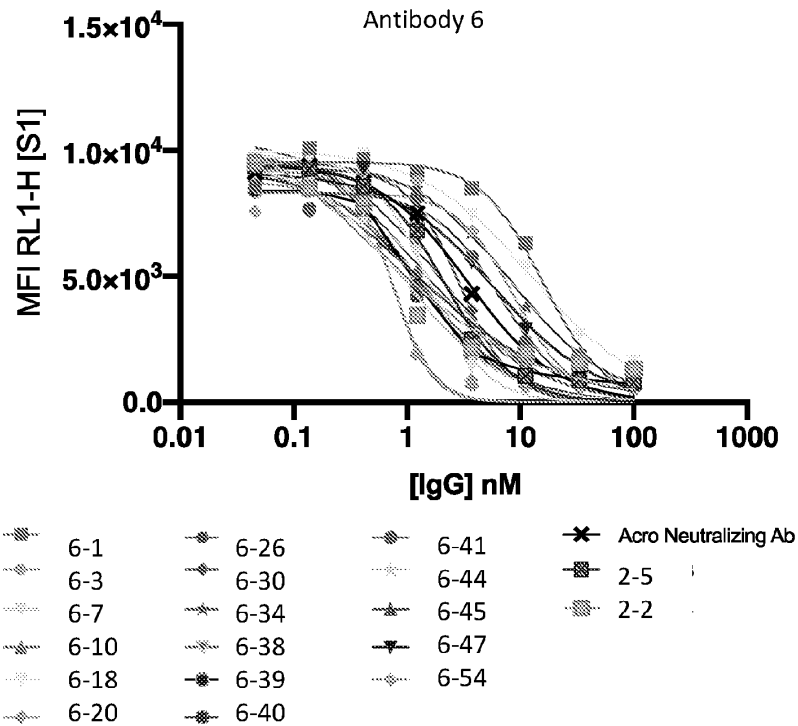


FIG. 30B

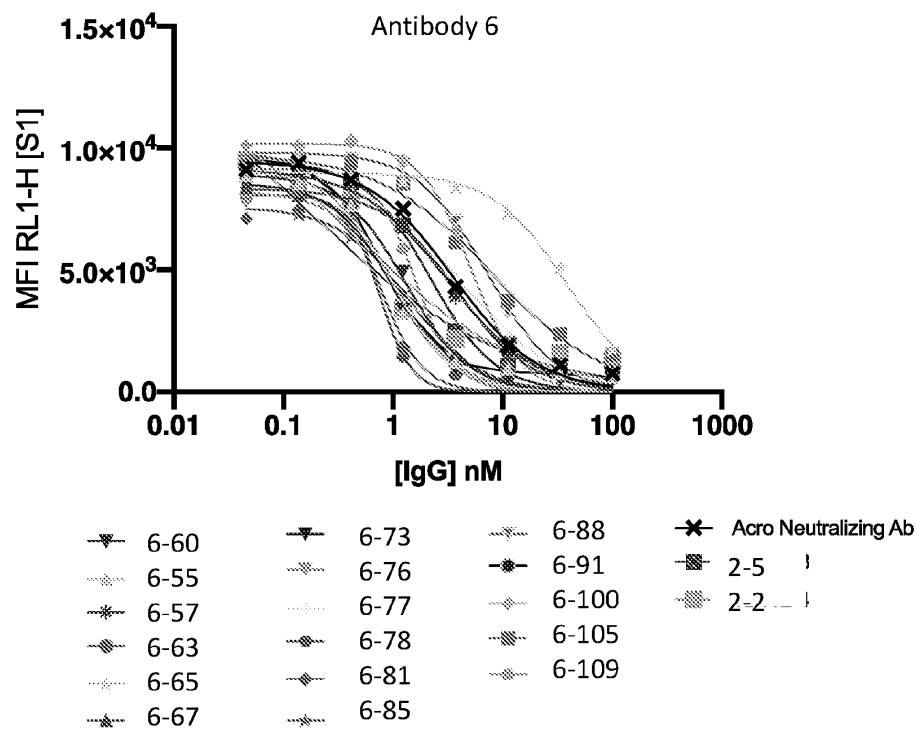


FIG. 30C

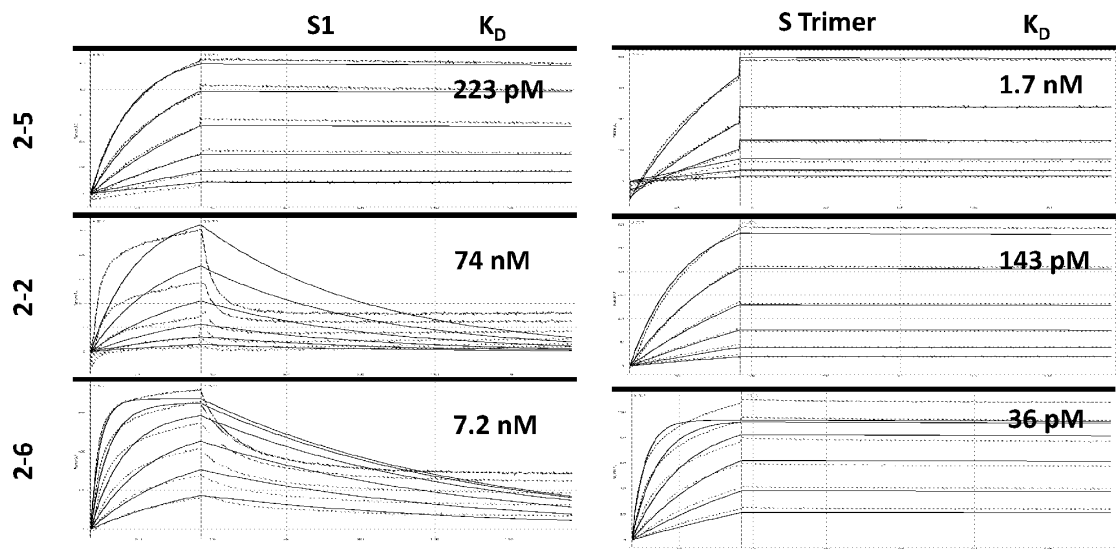


FIG. 31A

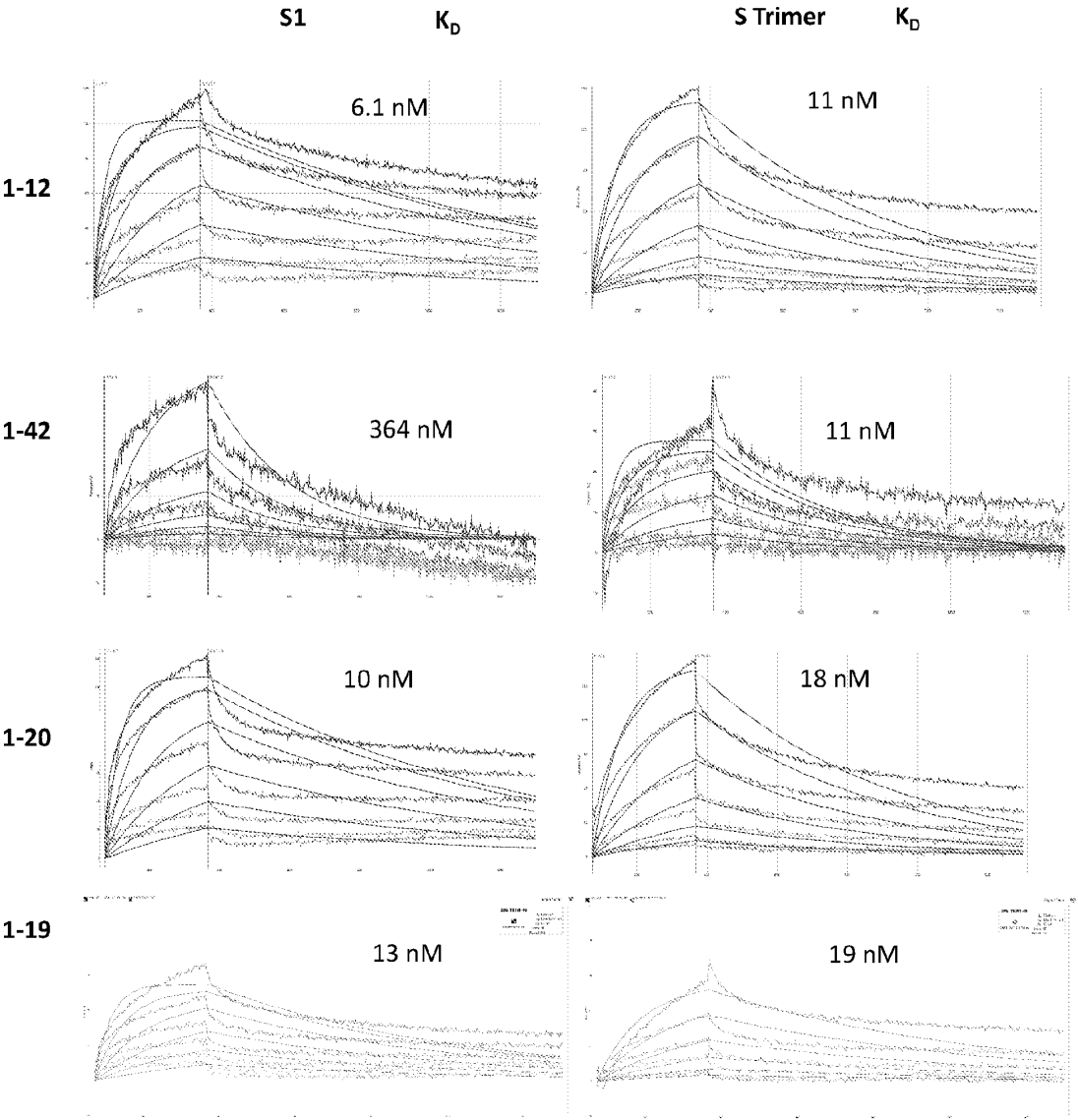


FIG. 31B

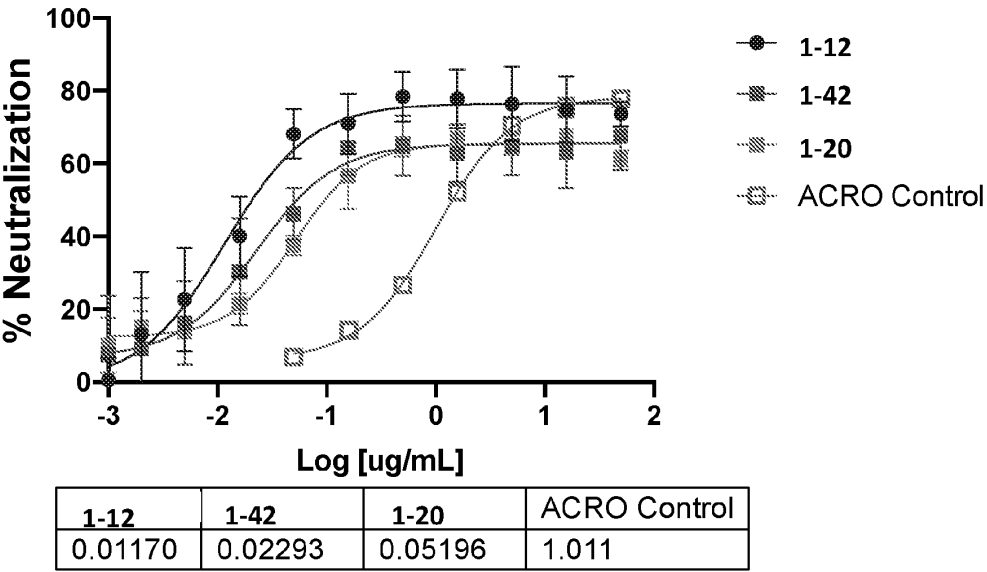


FIG. 31C

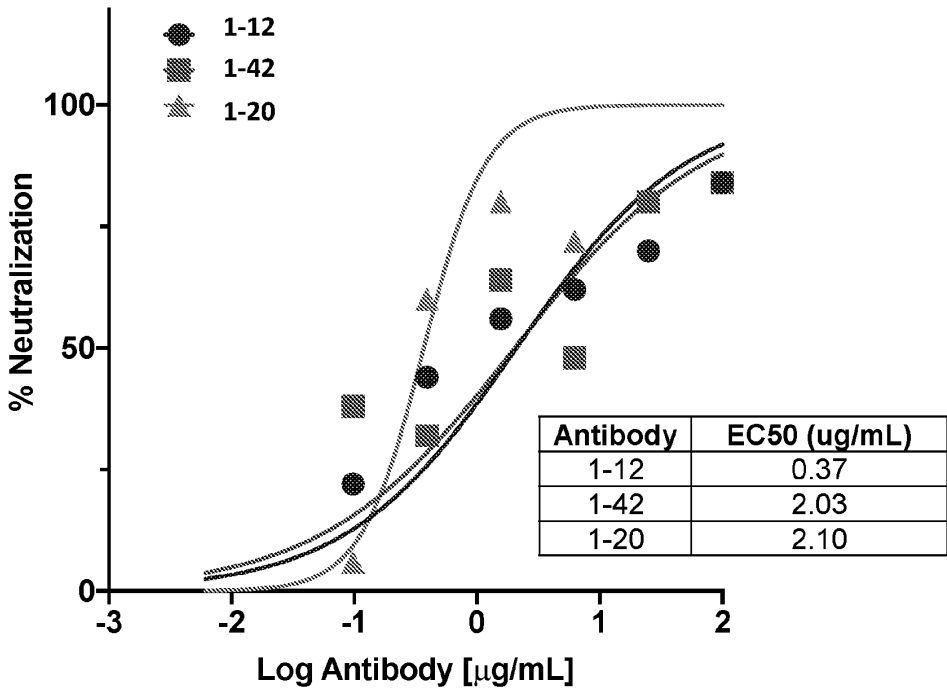


FIG. 31D

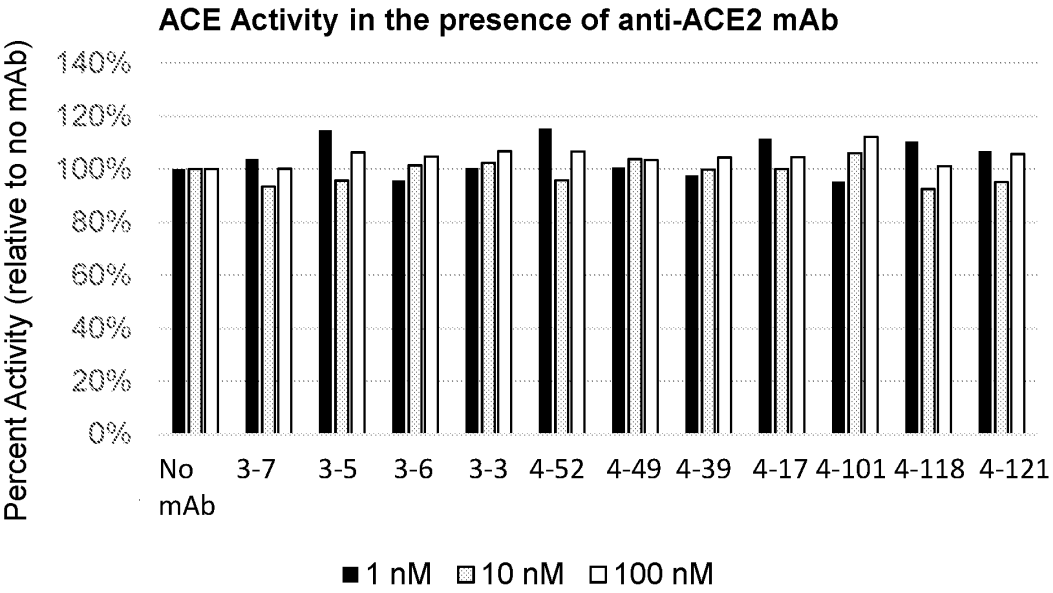


FIG. 32

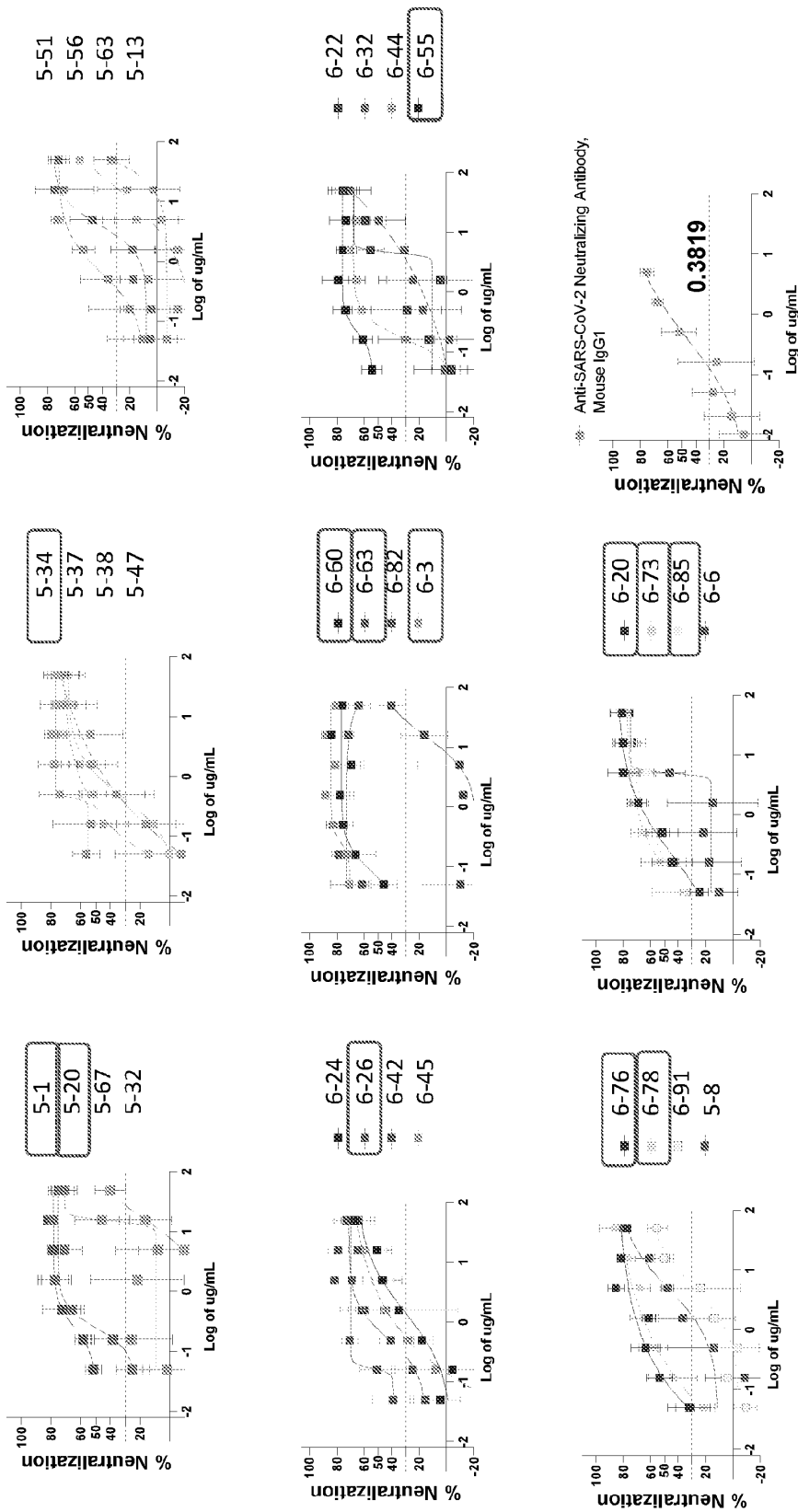
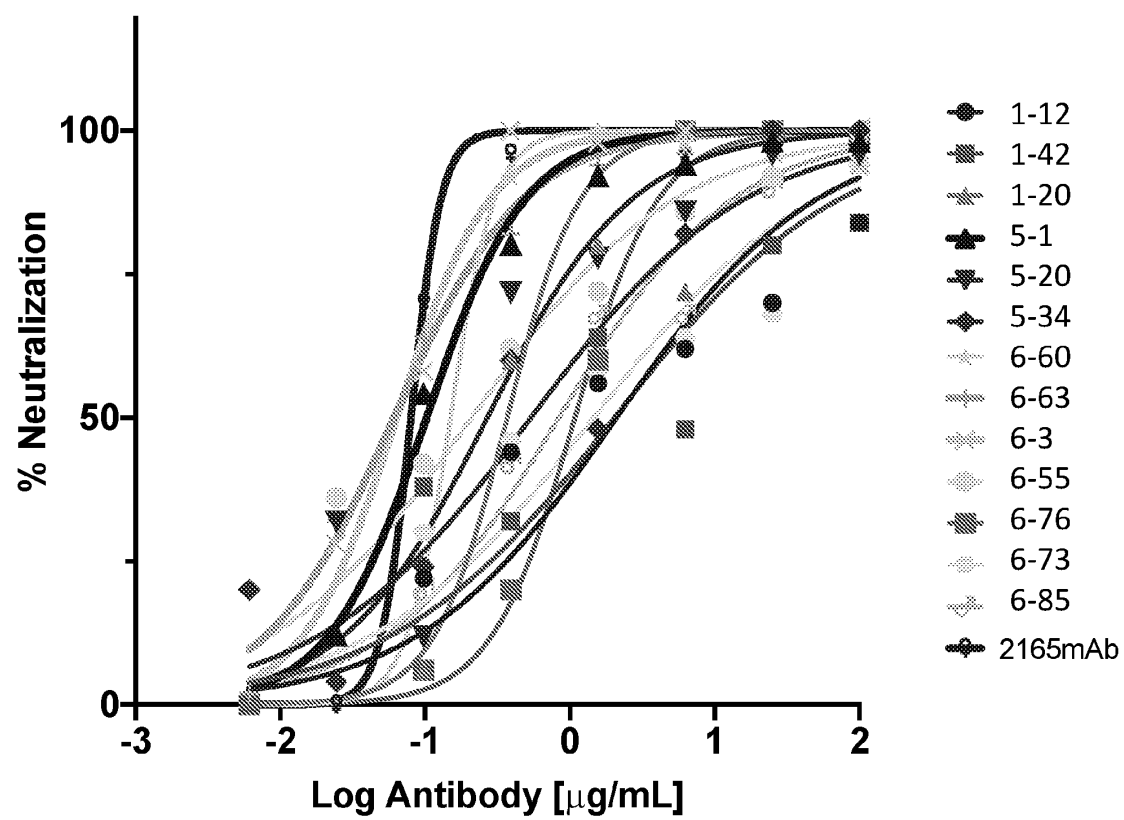


FIG. 33A

**FIG. 33B**

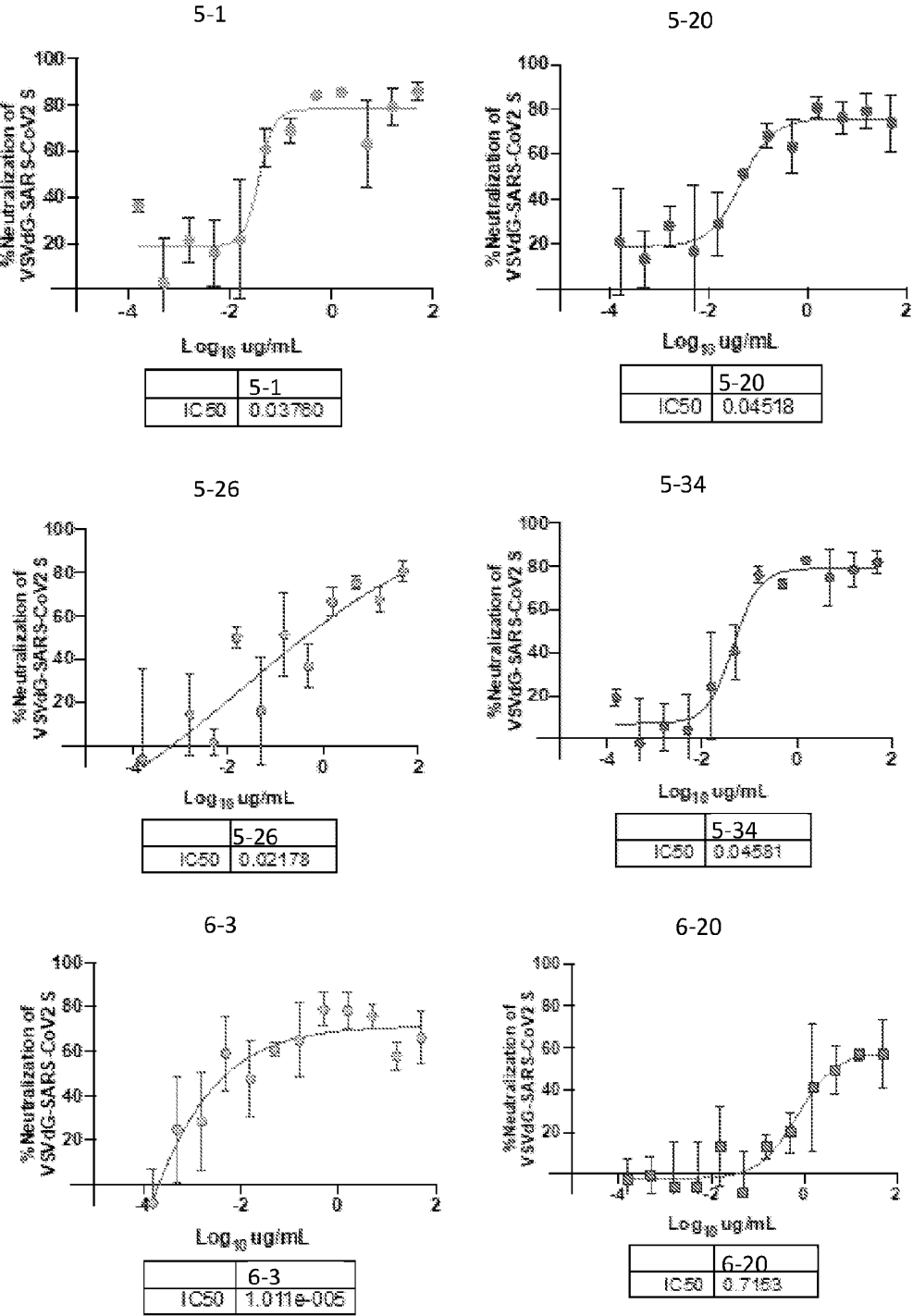


FIG. 33C

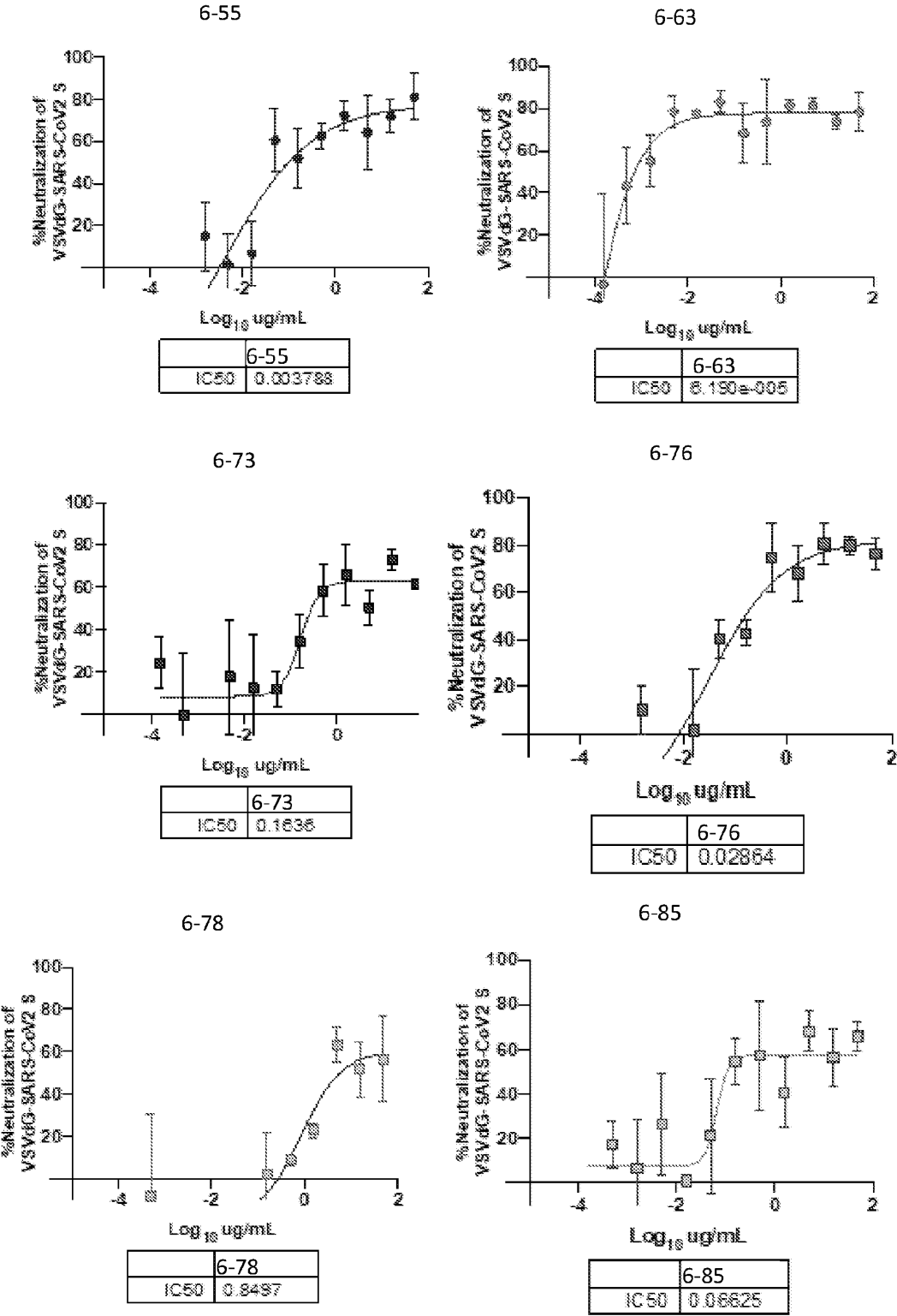


FIG. 33D

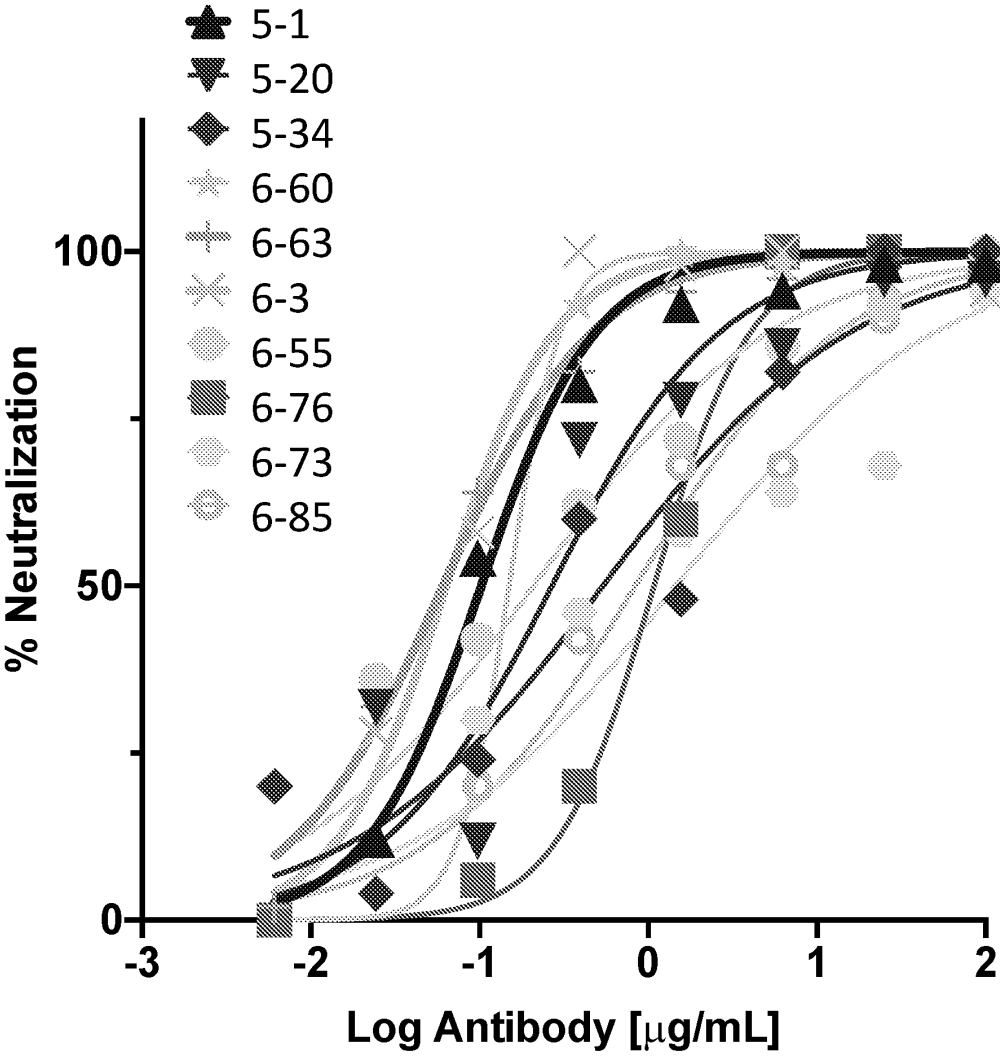
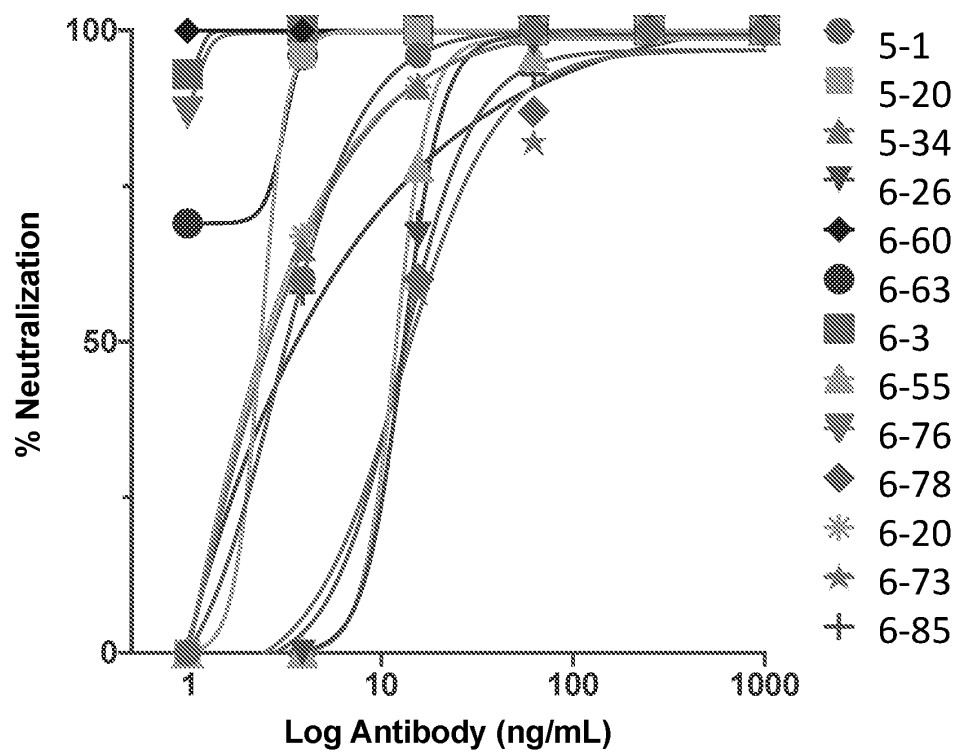


FIG. 33E

**FIG. 33F**

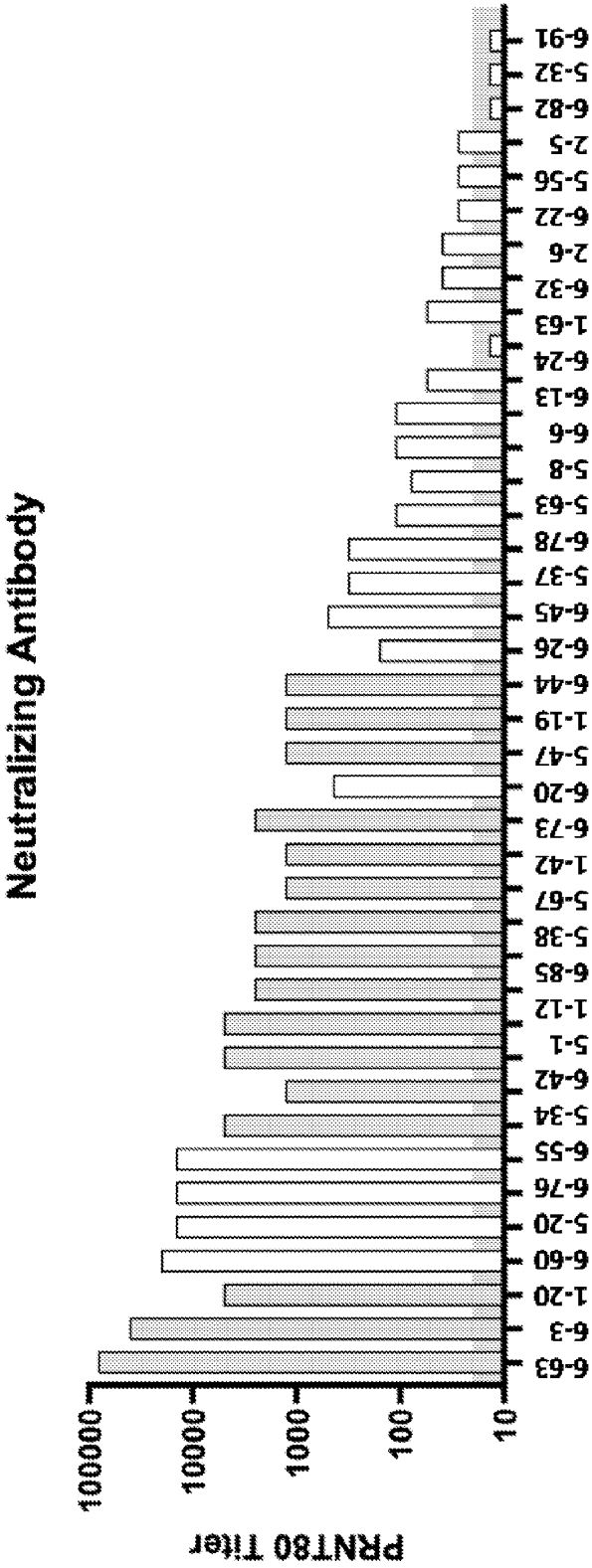


FIG. 33G

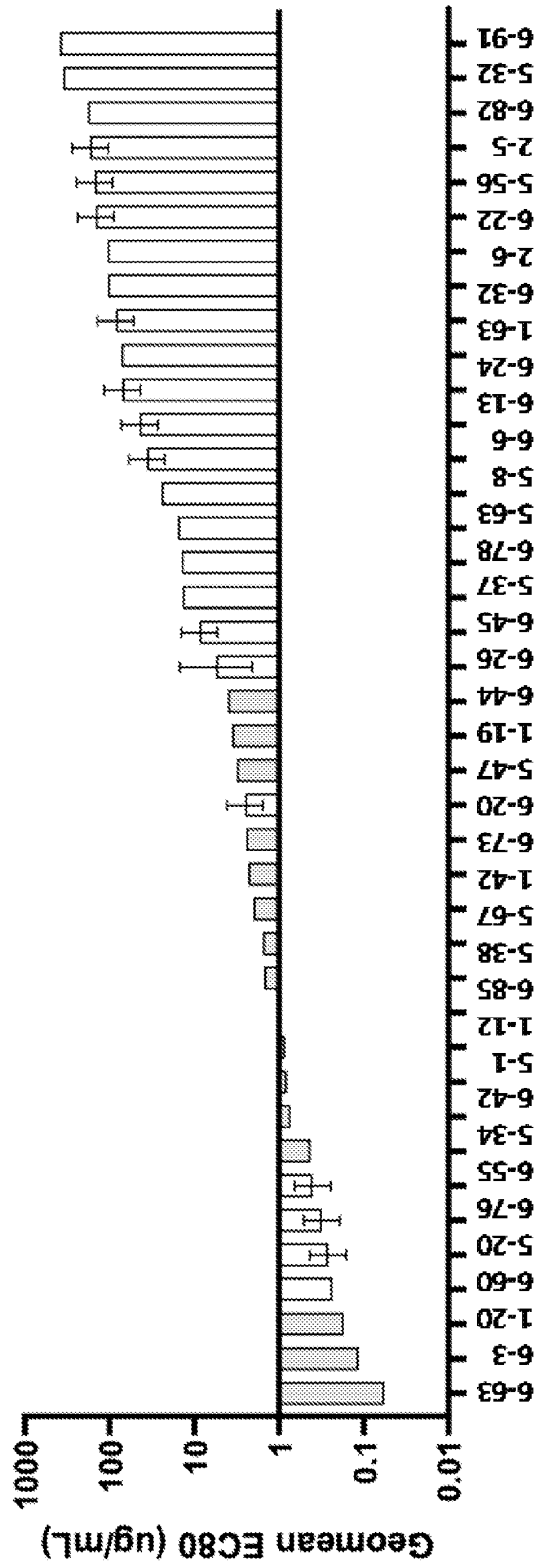
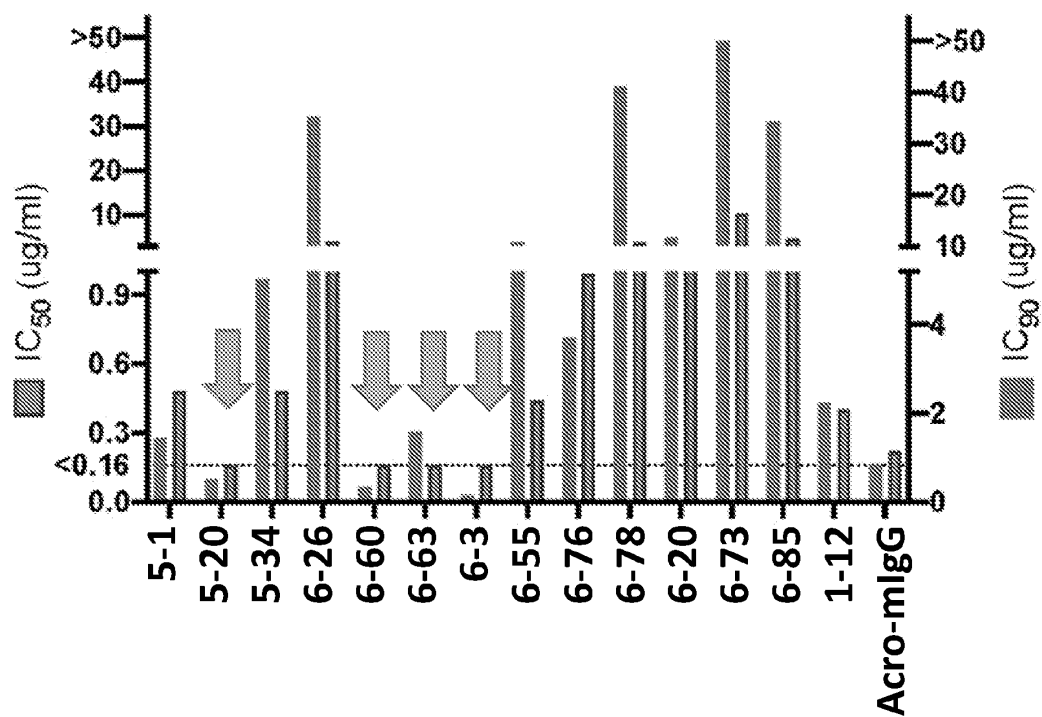


FIG. 33H

SARS-CoV-2 PRNT



mAB	Pseudovirus Neutralization Testing		SARS-CoV-2 PRNT	
	NT50 (ug/mL)	%Neut recorded at highest concentration tested (i.e. 50 ug/mL)	IC50 (ug/mL)	IC90 (ug/mL)
5-1	0.0376	85.92% ±4.25	0.48	1.44
5-20	0.04518	73.88% ±12.82	<0.16	0.50
5-34	0.04581	82.02% ±5.43	0.48	5.01
6-26	0.02178	80.53% ±4.64	4.15	35.19
6-60	0.01467	77.58% ±7.25	<0.16	0.34
6-63	0.00104	78.71% ±9.23	<0.16	1.58
6-3	0.007	66.14% ±11.79	<0.16	0.16
6-55	0.158	81.38% ±11.04	0.44	10.85
6-76	0.02864	76.21% ±6.94	0.99	3.70
6-78	0.8497	56.6% ±19.95	3.79	41.11
6-20	0.7153	56.83% ±16.48	1.49	11.68
6-73	0.1636	61.89% ±1.03	10.42	>50
6-85	0.06625	65.8% ±6.9	4.72	34.28
1-12	0.01941	73.6% ±3.4	0.40	2.23

FIG. 33I

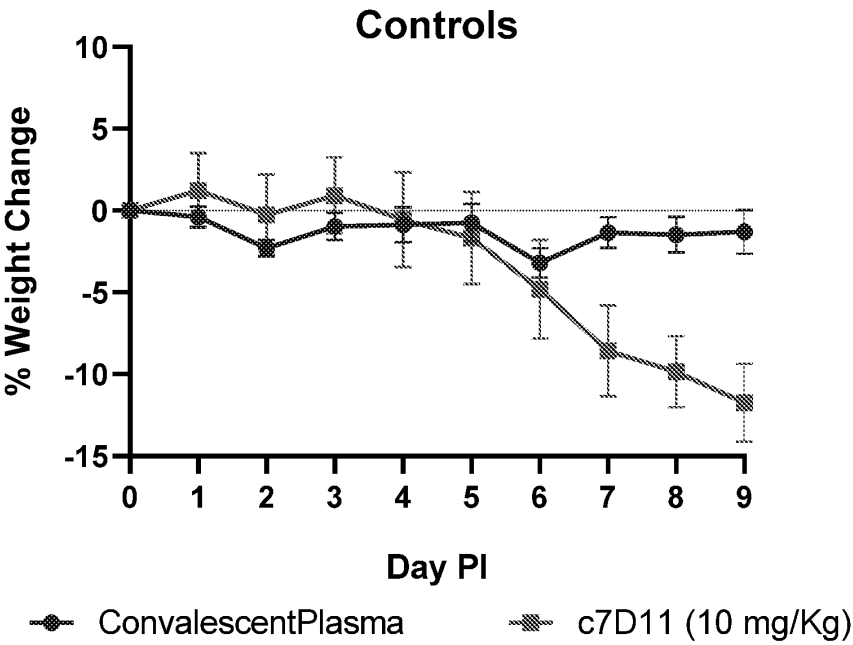


FIG. 34A

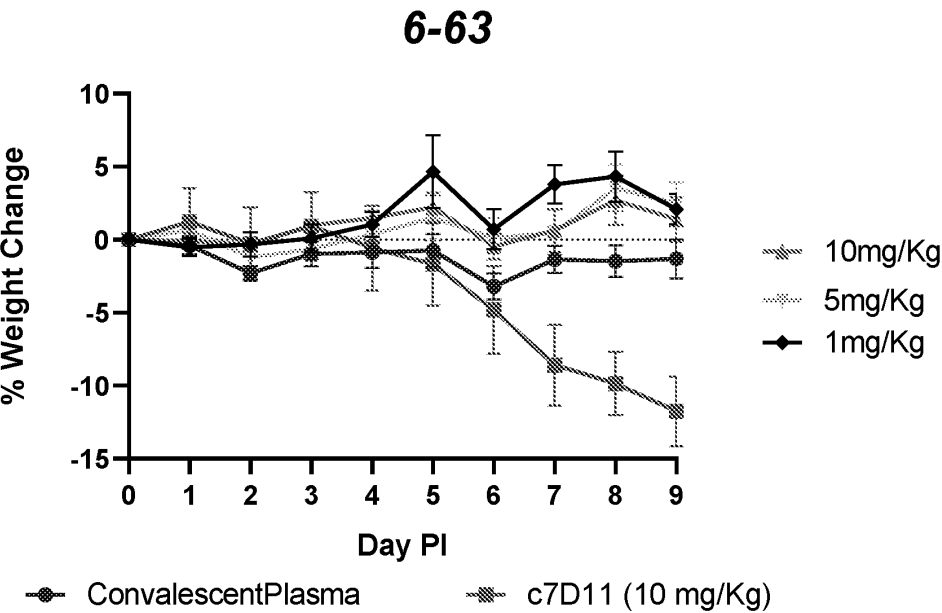


FIG. 34B

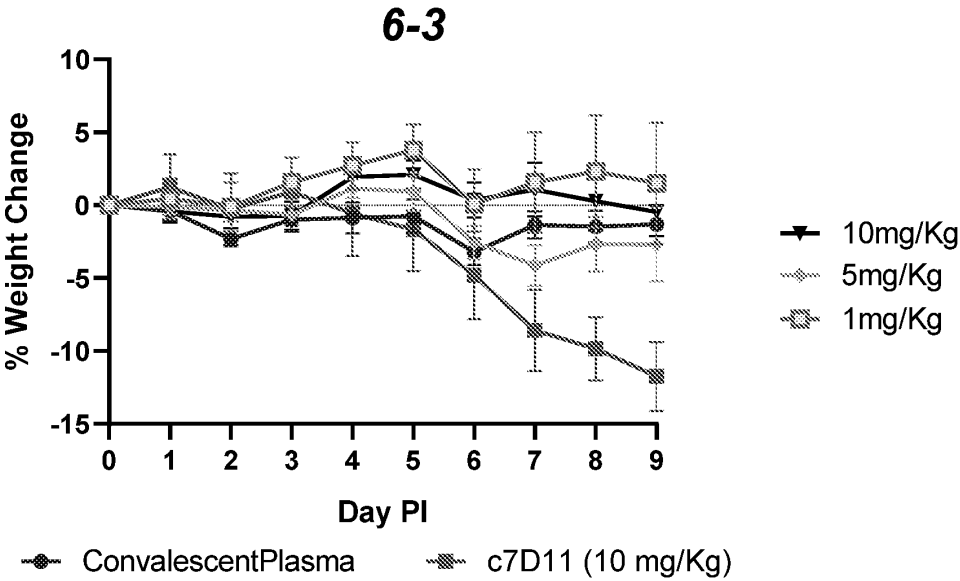


FIG. 34C

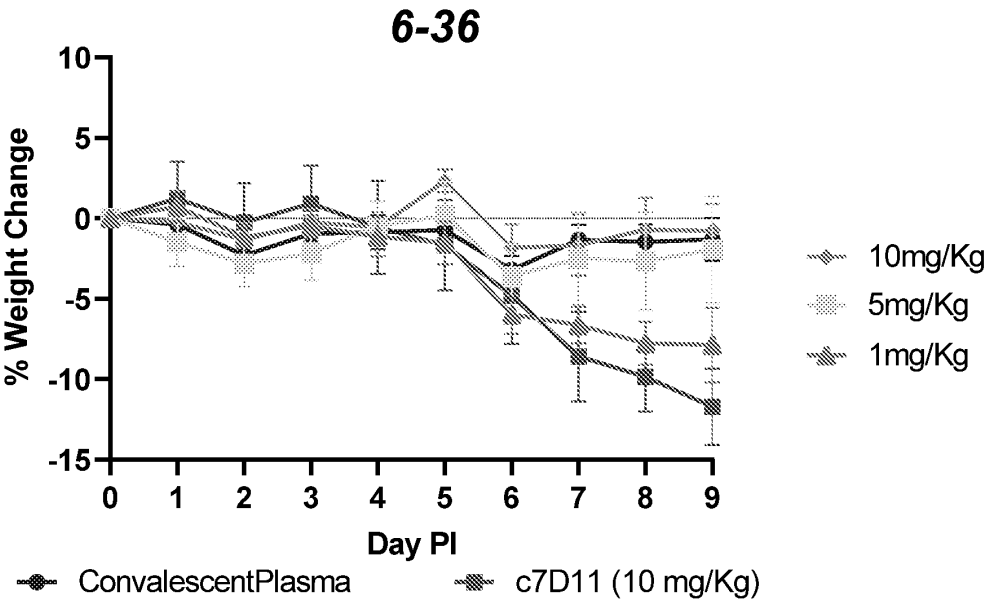


FIG. 34D

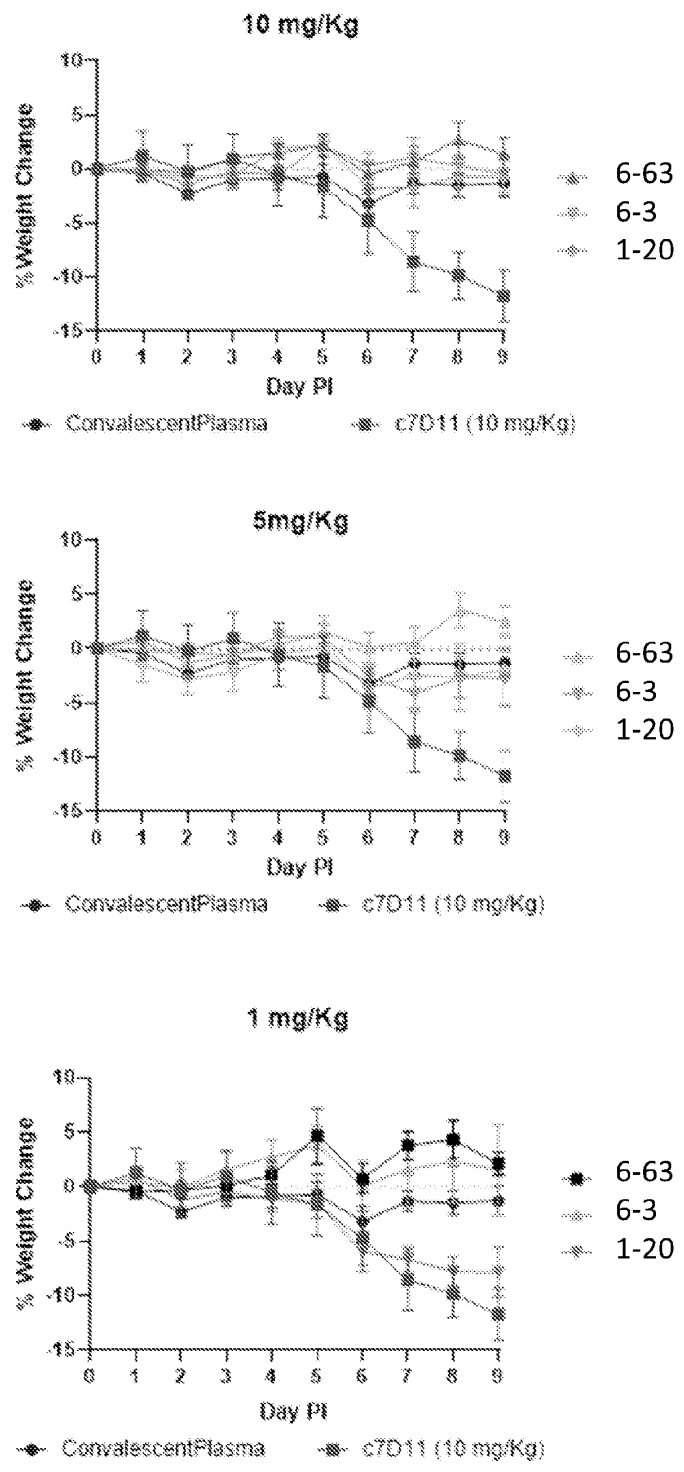


FIG. 34E

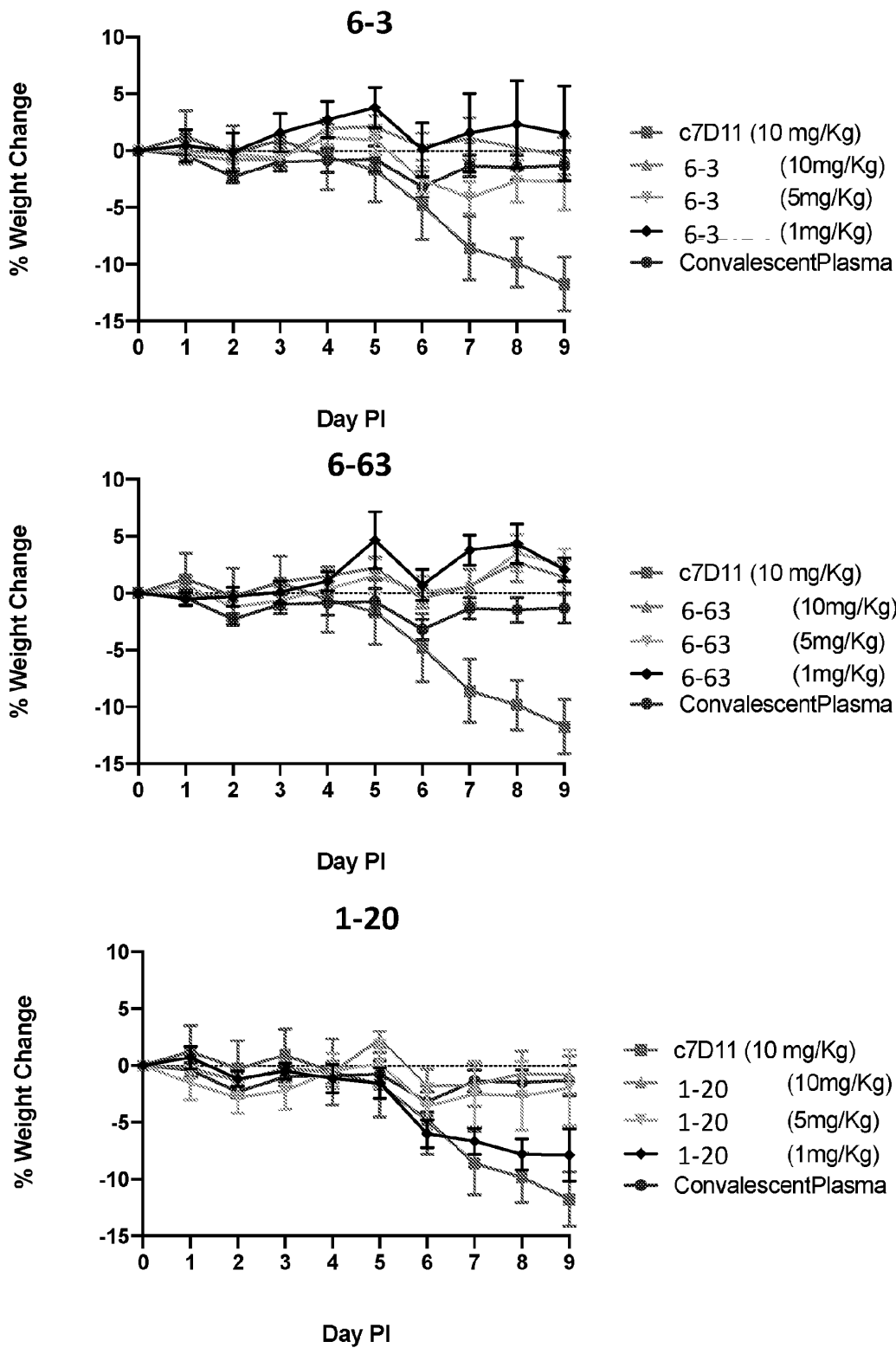


FIG. 34F

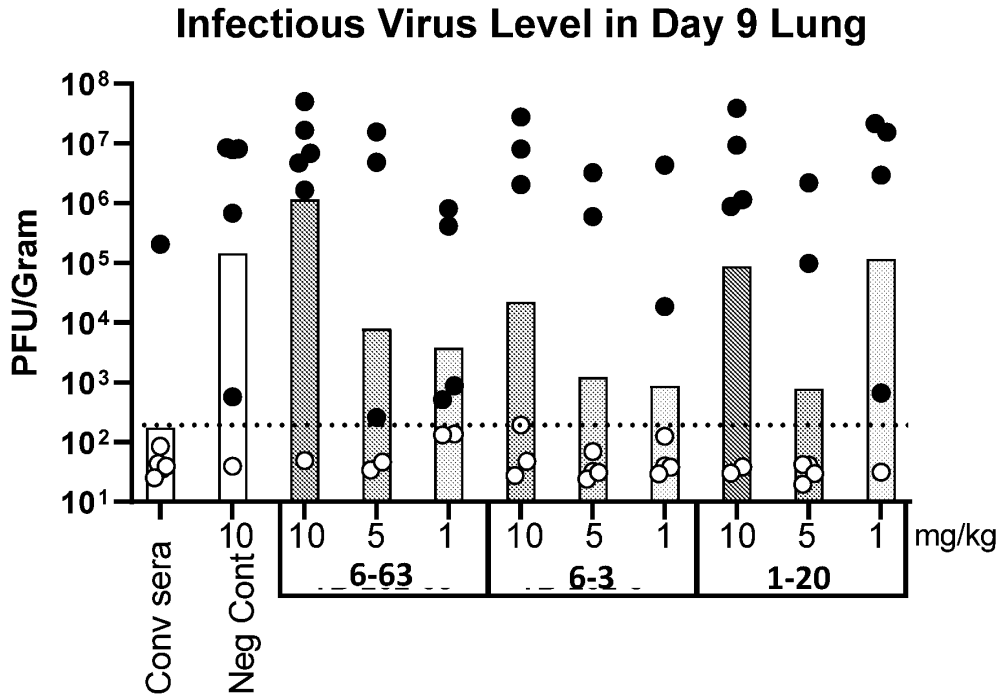


FIG. 34G

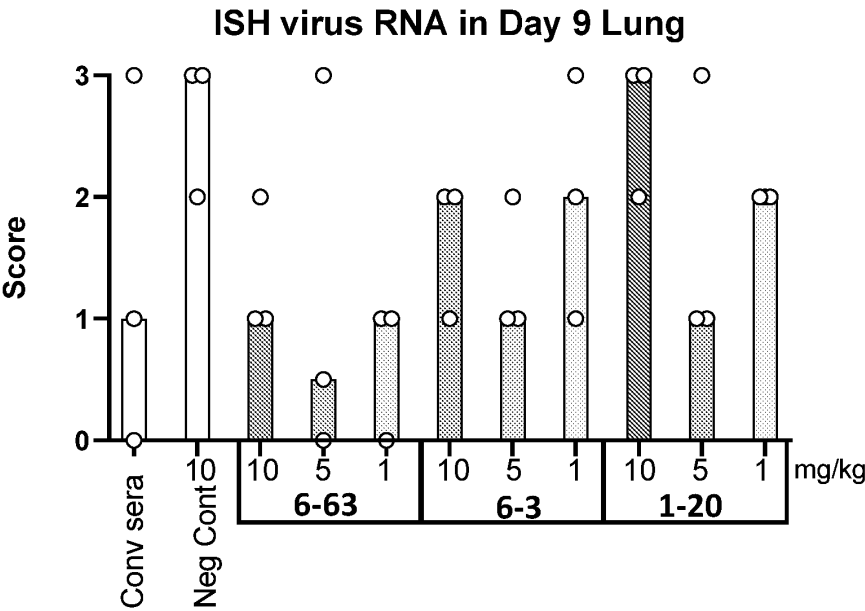


FIG. 34H

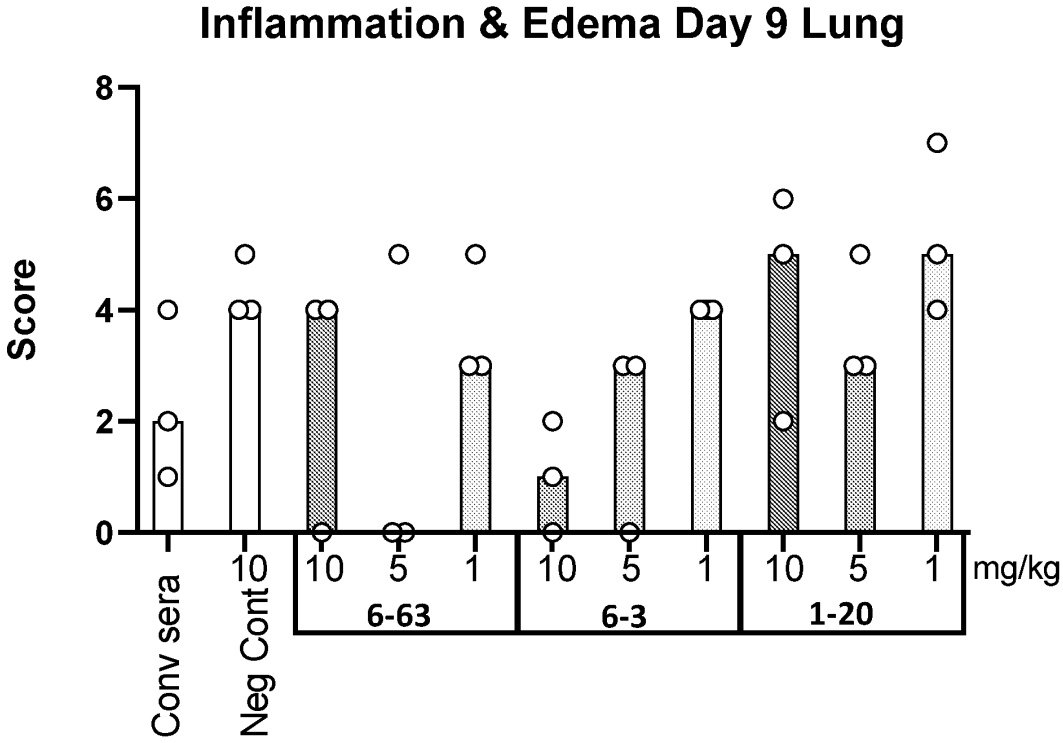


FIG. 34I

Sequence of SARS-CoV-2 Membrane glycoprotein construct

MADSNGTITVEELKKLLEQWNLVIGFLFTWICLLQFAYANRNRFlyIIKLIFLWLLWPVTLACFVLAAYRINWITGGI
AIAMACLVGLMWLSYFIASFRLFARTRSMWSFNPEtNILLNVPLHGTILTRPLLESELVIGAVILRGHLRIAGHHLGR
CDIKDLPKEITVATSRtLSYYKL GASQRVAGDSGFAAYSRYRIGNYKLNtDHSSSDNIALLVQGLNDIFEAQKIEW
HEGSLELFGGPGTsvSKGEELFTGVVPILVELDGDVNGHKFSVSGEGDATYgKLTlKFICTTGKLPVPWPTL
VTTLTYGVQCFSRYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEgDTLVNRIELKGIDFKEDGN
ILGHKLEYNYNshNVYIMADKQKNGIKVNFKIRHNIEDGSVQLADHYQQNTPIGDGPVLLPDNHYLSTQSKLSKDP
NEKRDHMLLEFVTAAGITLGMDELYKHHHHHHHHH

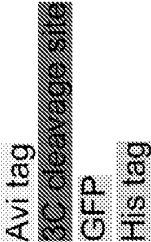


FIG. 35

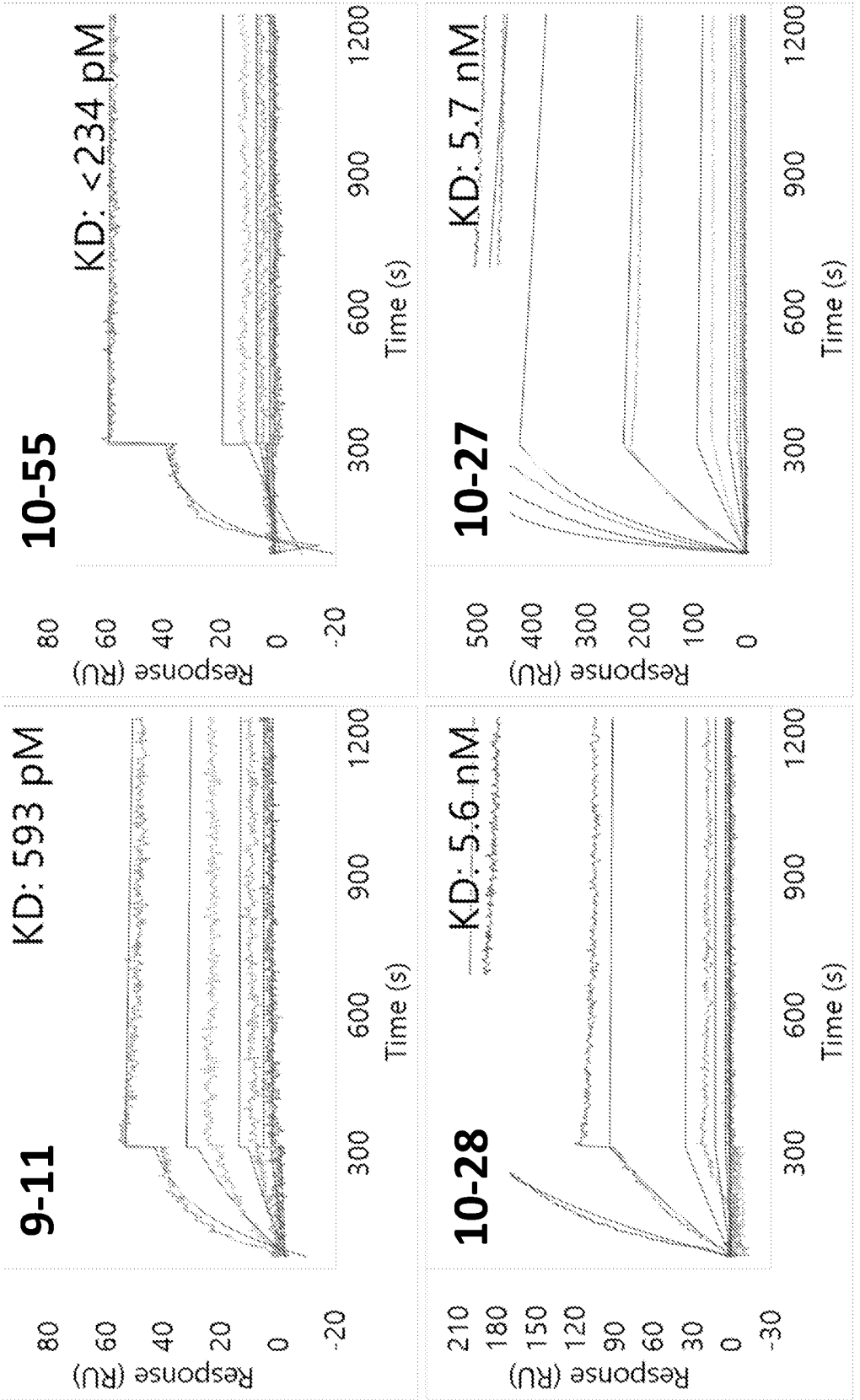


FIG. 36A

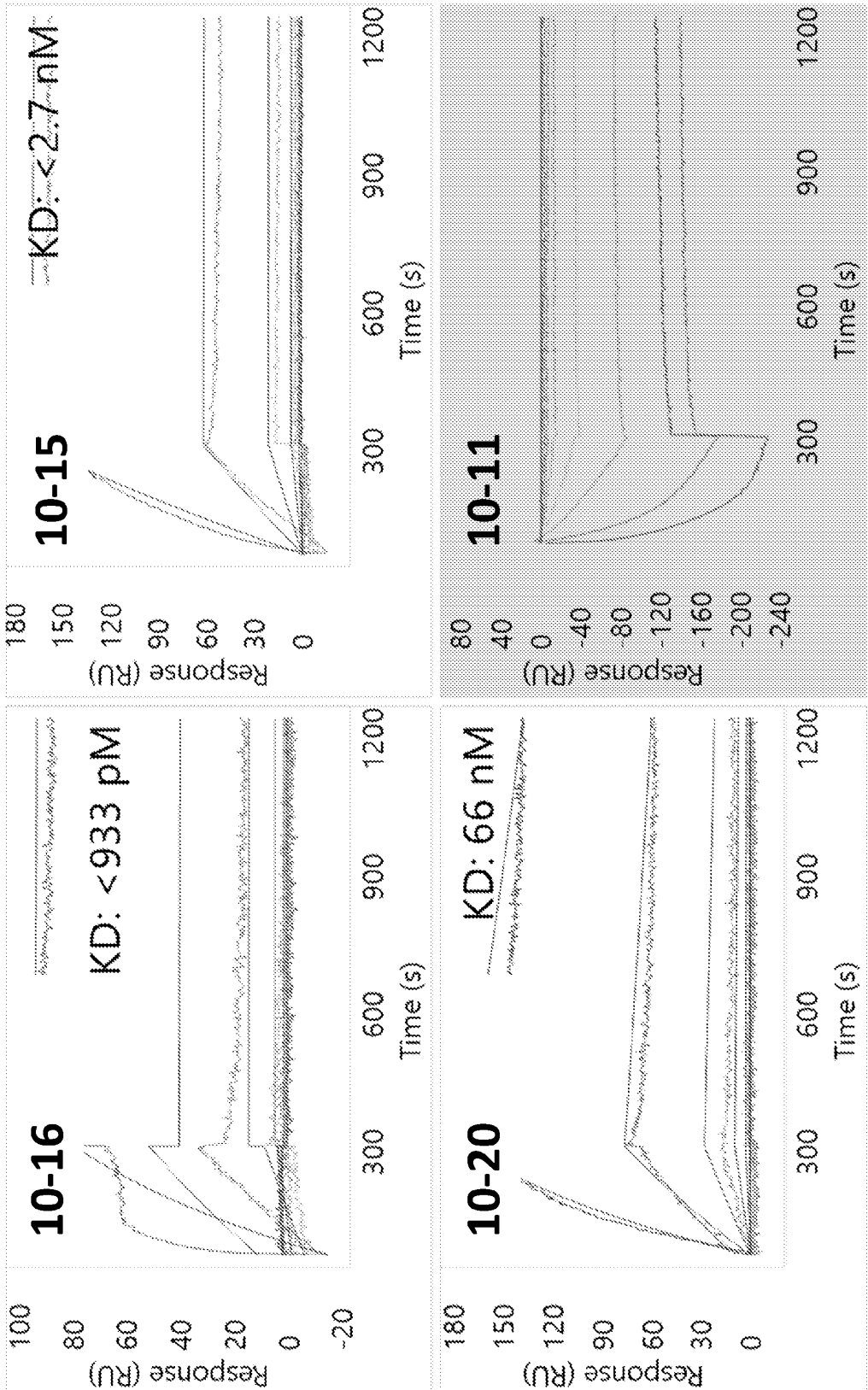


FIG. 36B

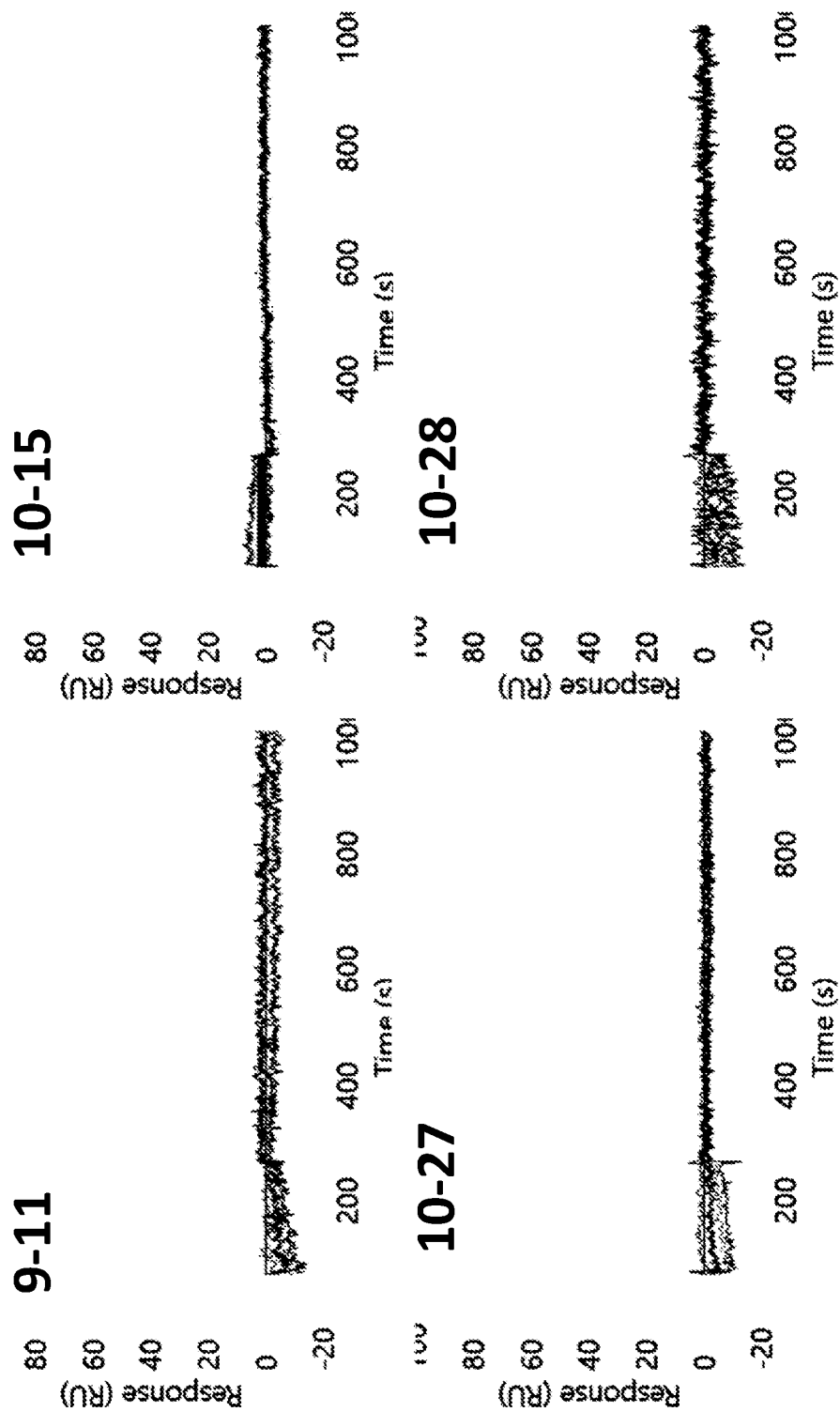


FIG. 36C

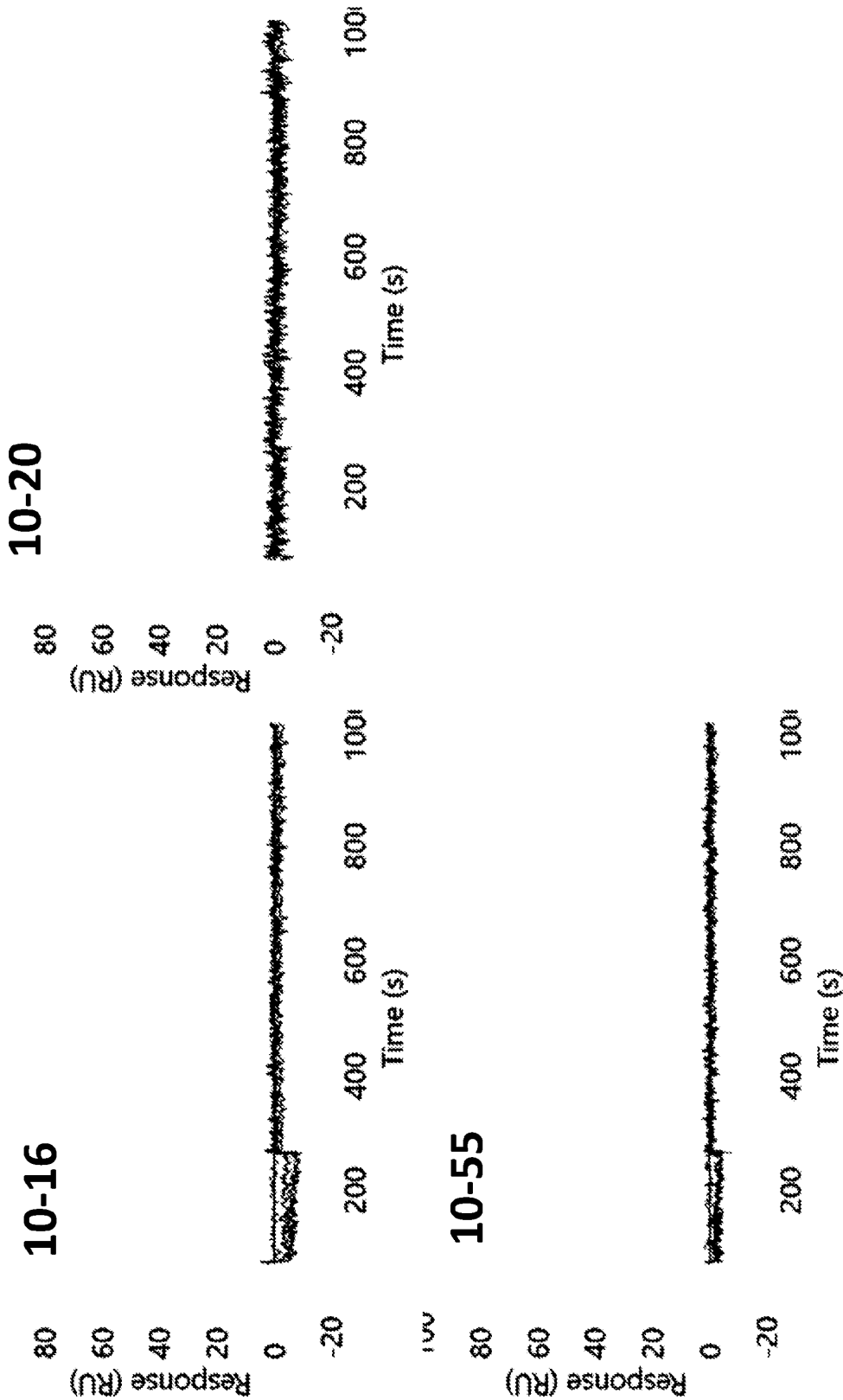


FIG. 36D

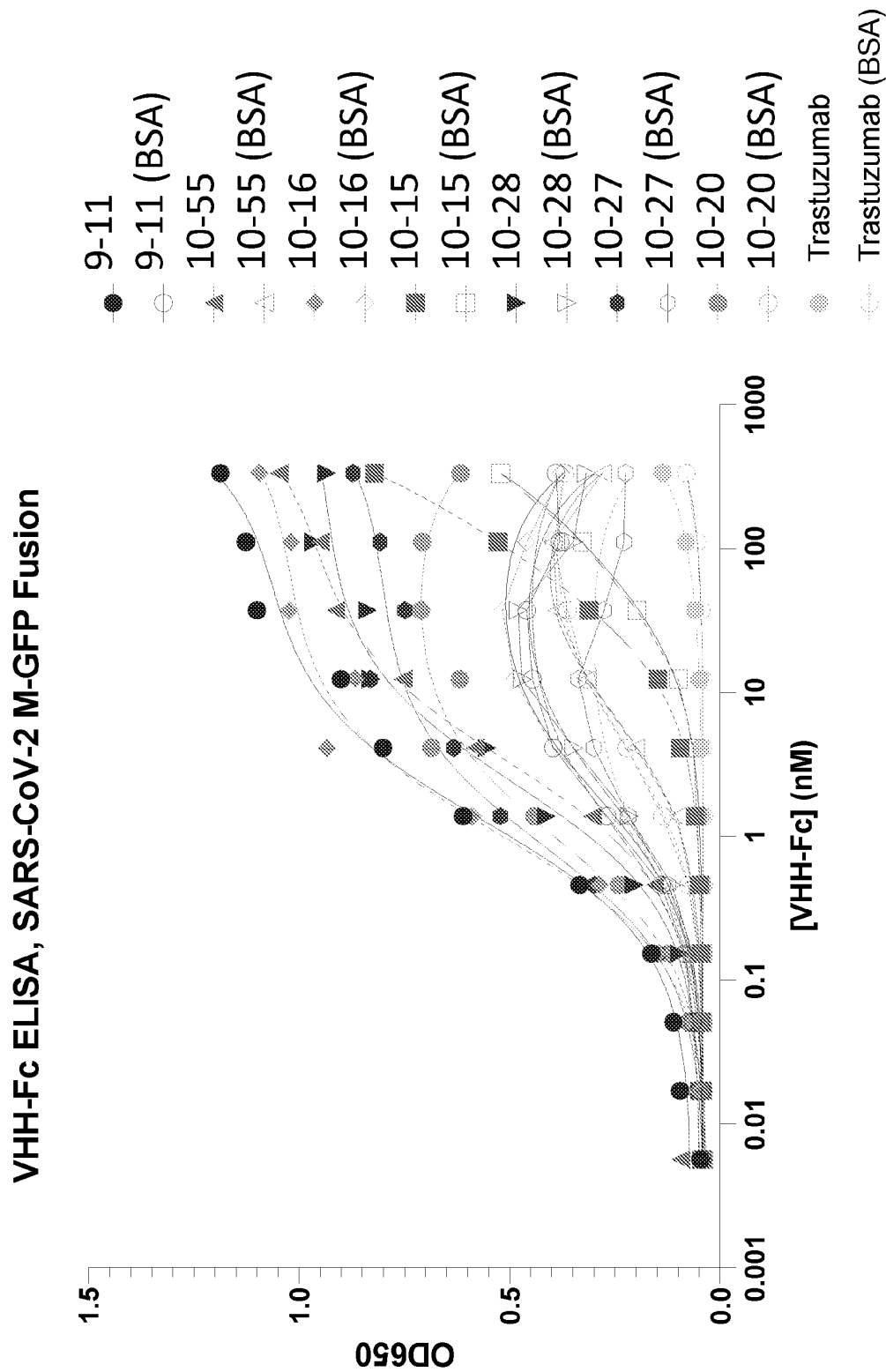


FIG. 37A

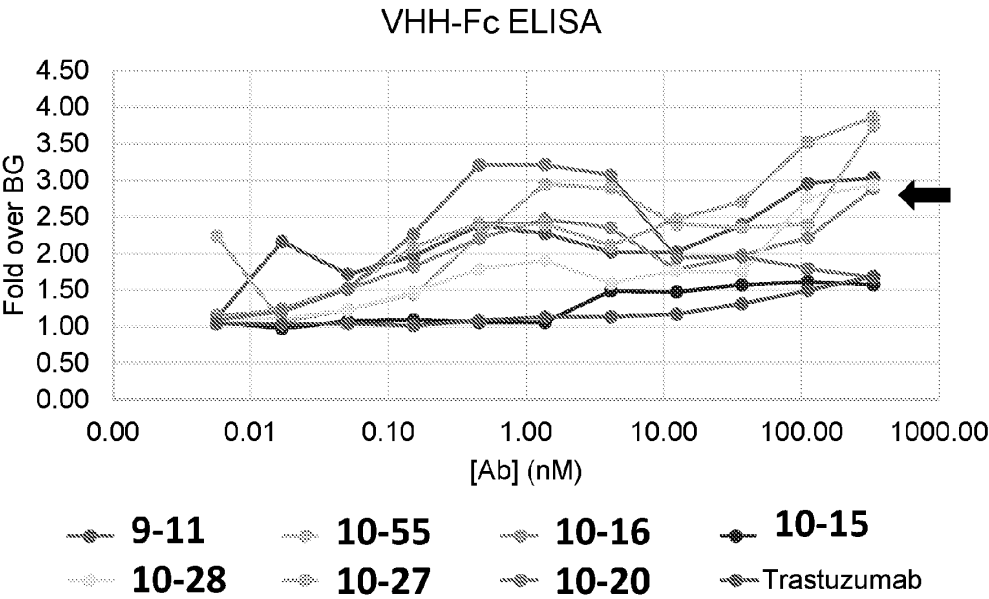


FIG. 37B

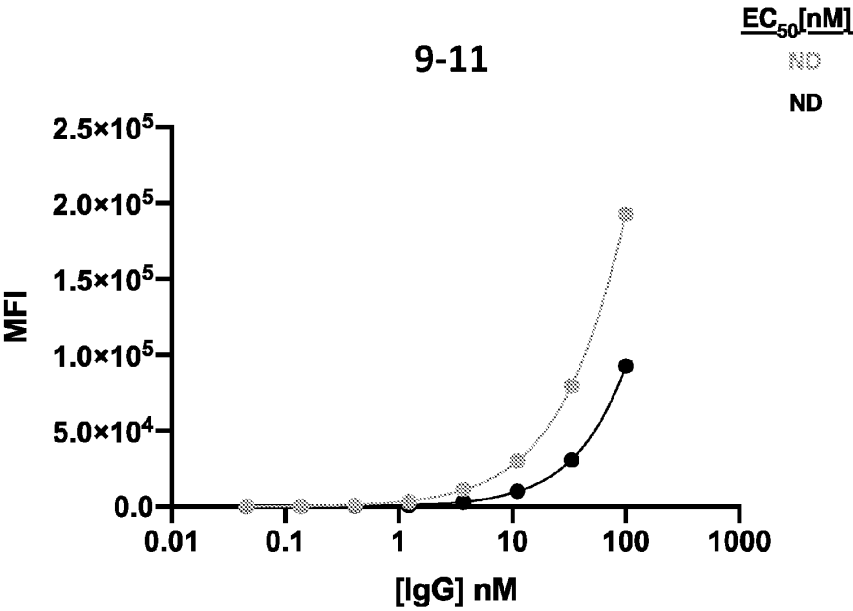


FIG. 38A

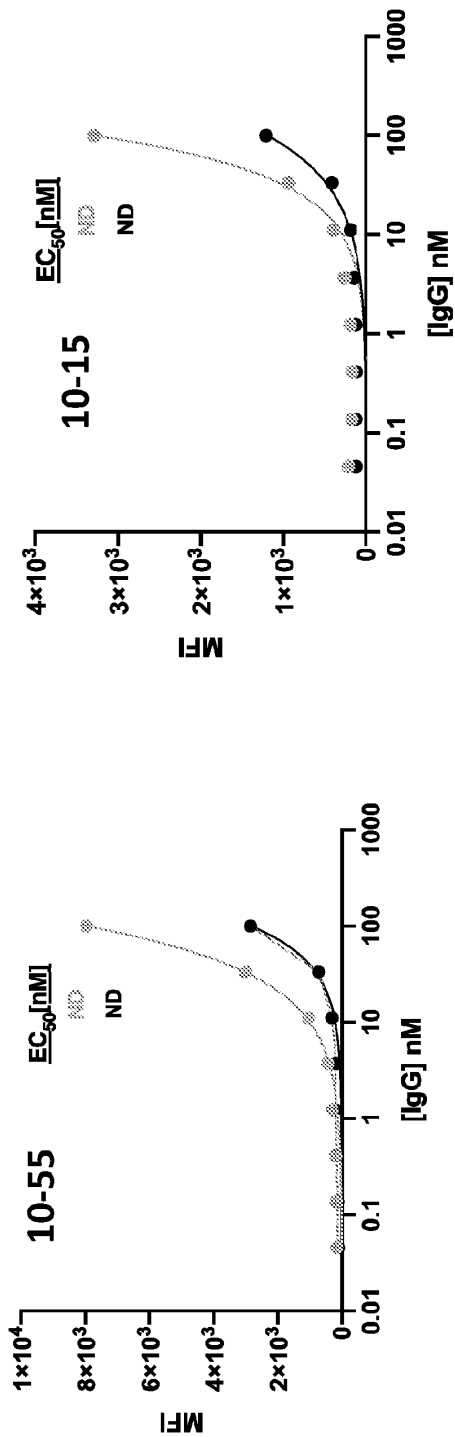


FIG. 38B

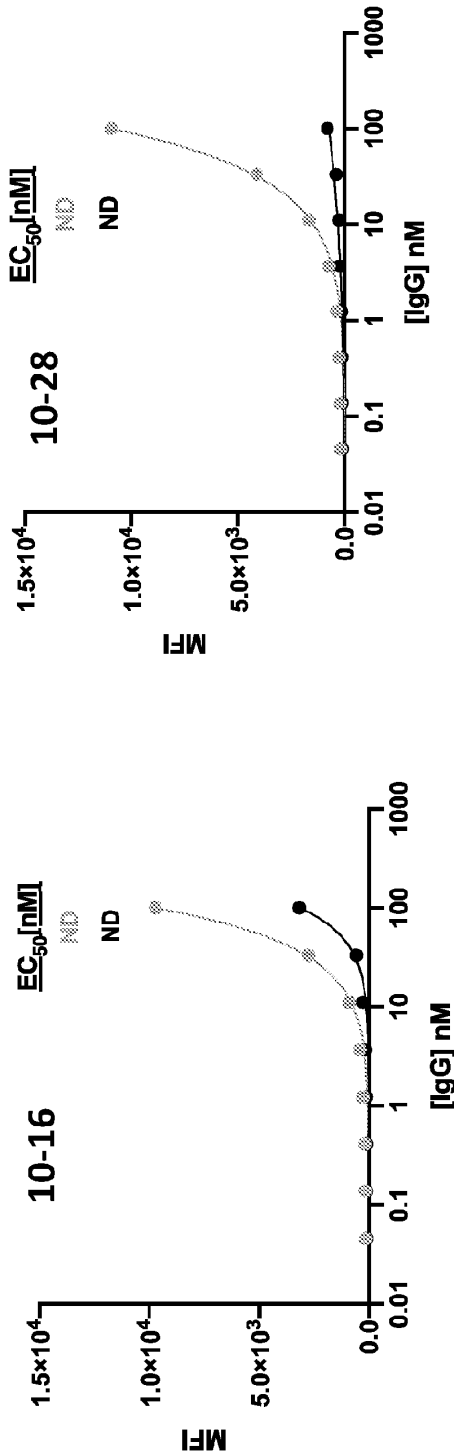


FIG. 38D

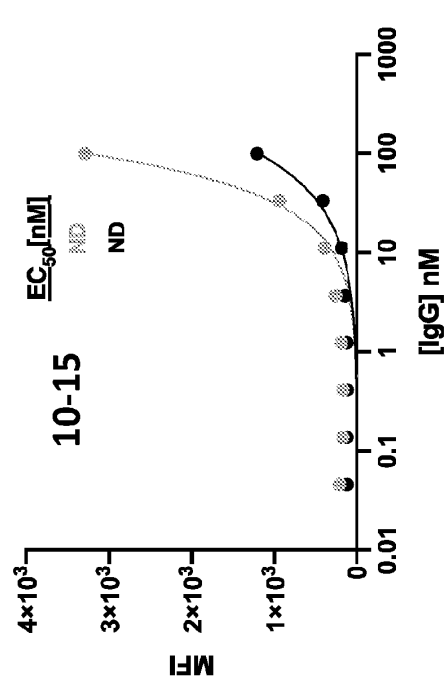


FIG. 38C

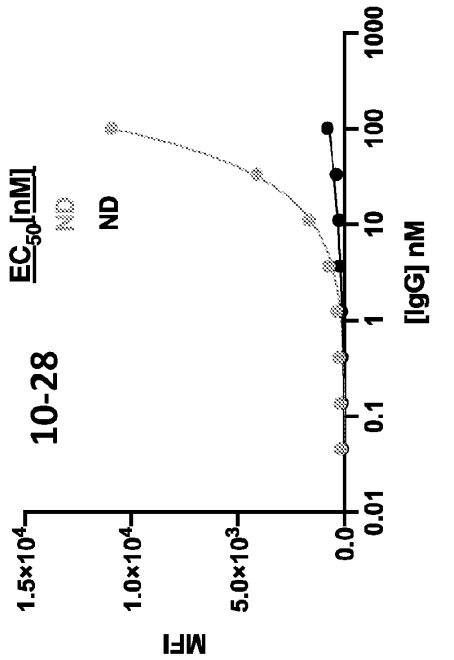


FIG. 38E

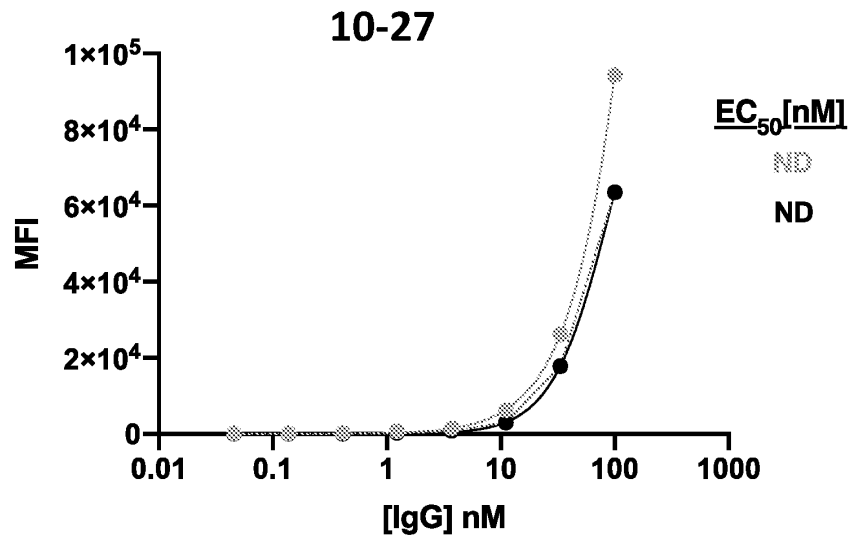


FIG. 38F

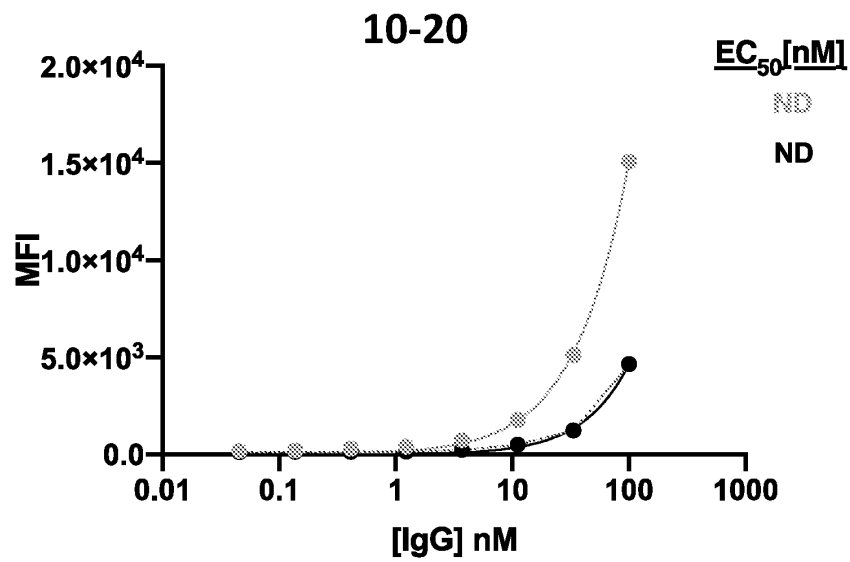


FIG. 38G

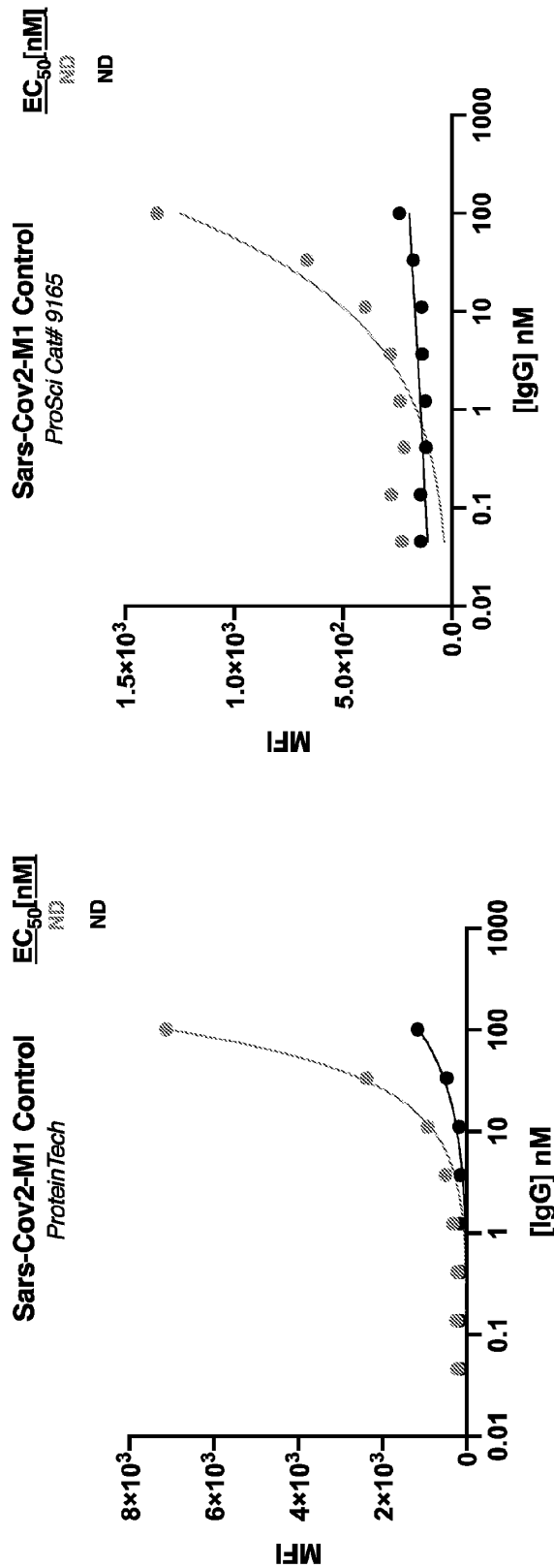
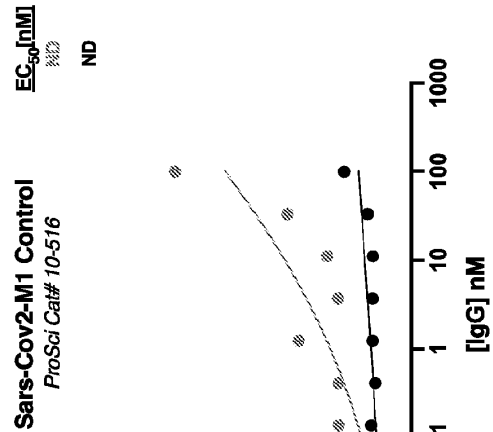


FIG. 38I



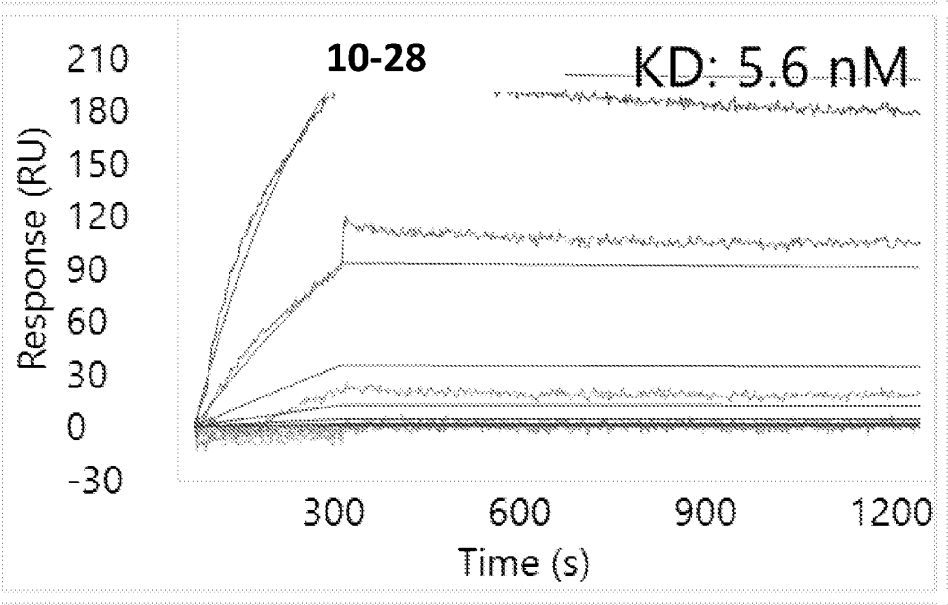


FIG. 39A

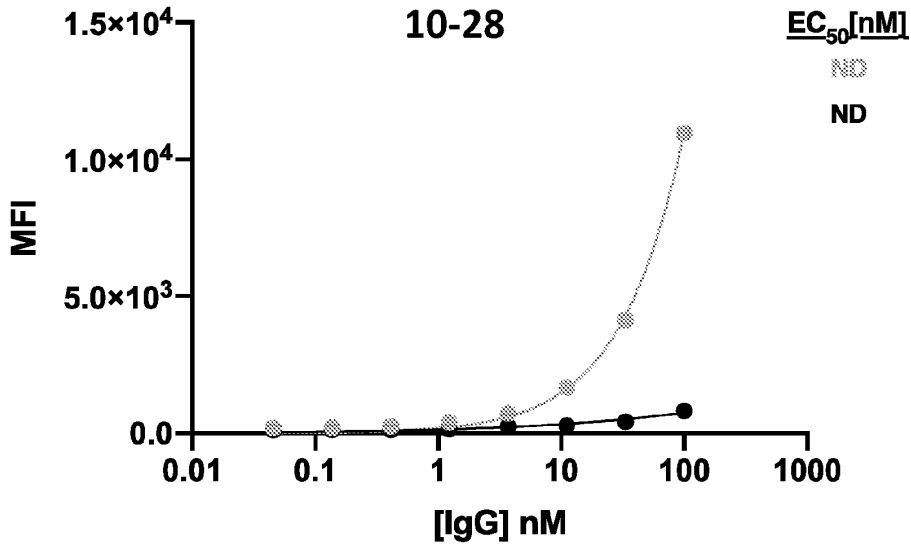


FIG. 39B

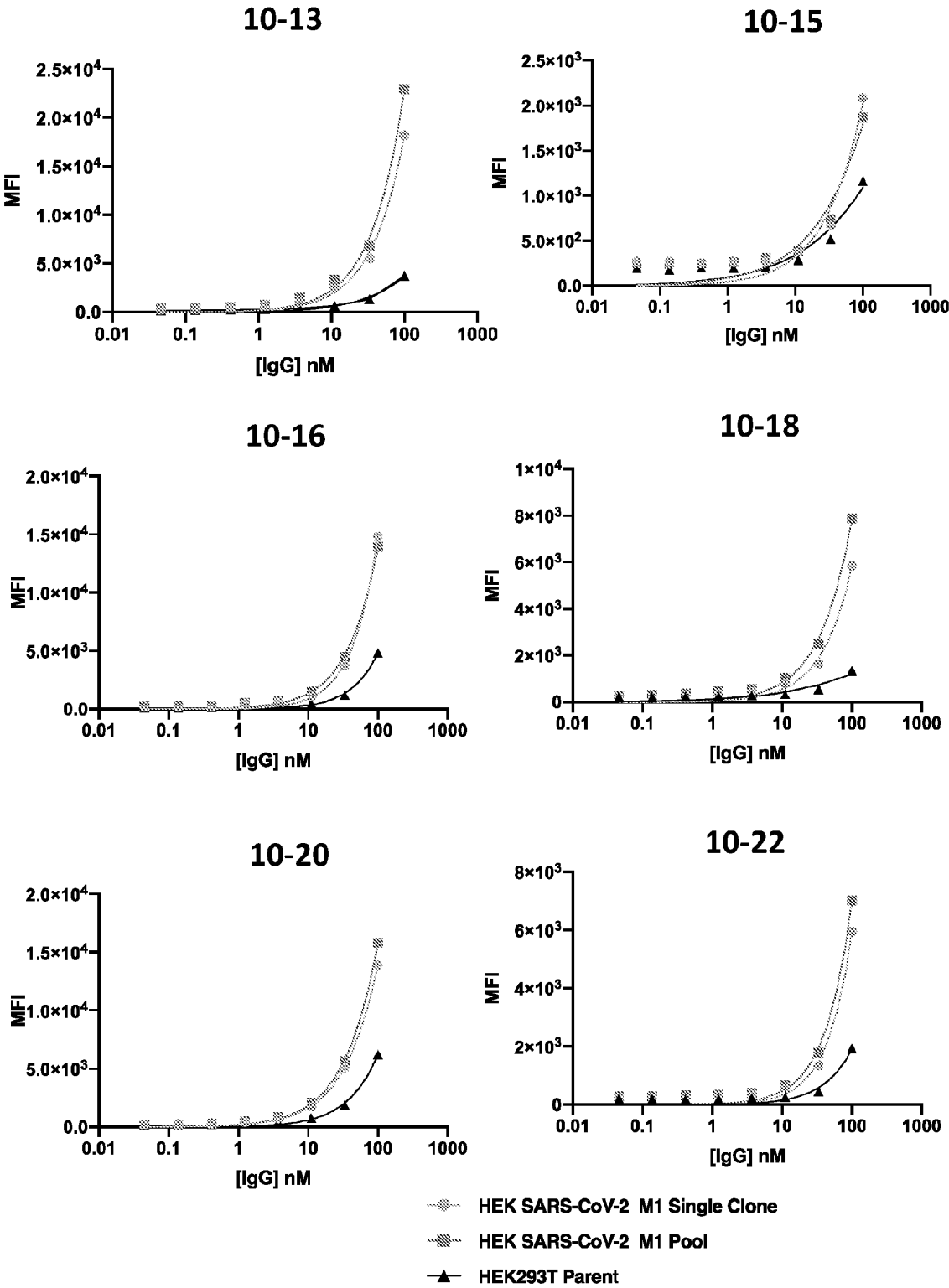
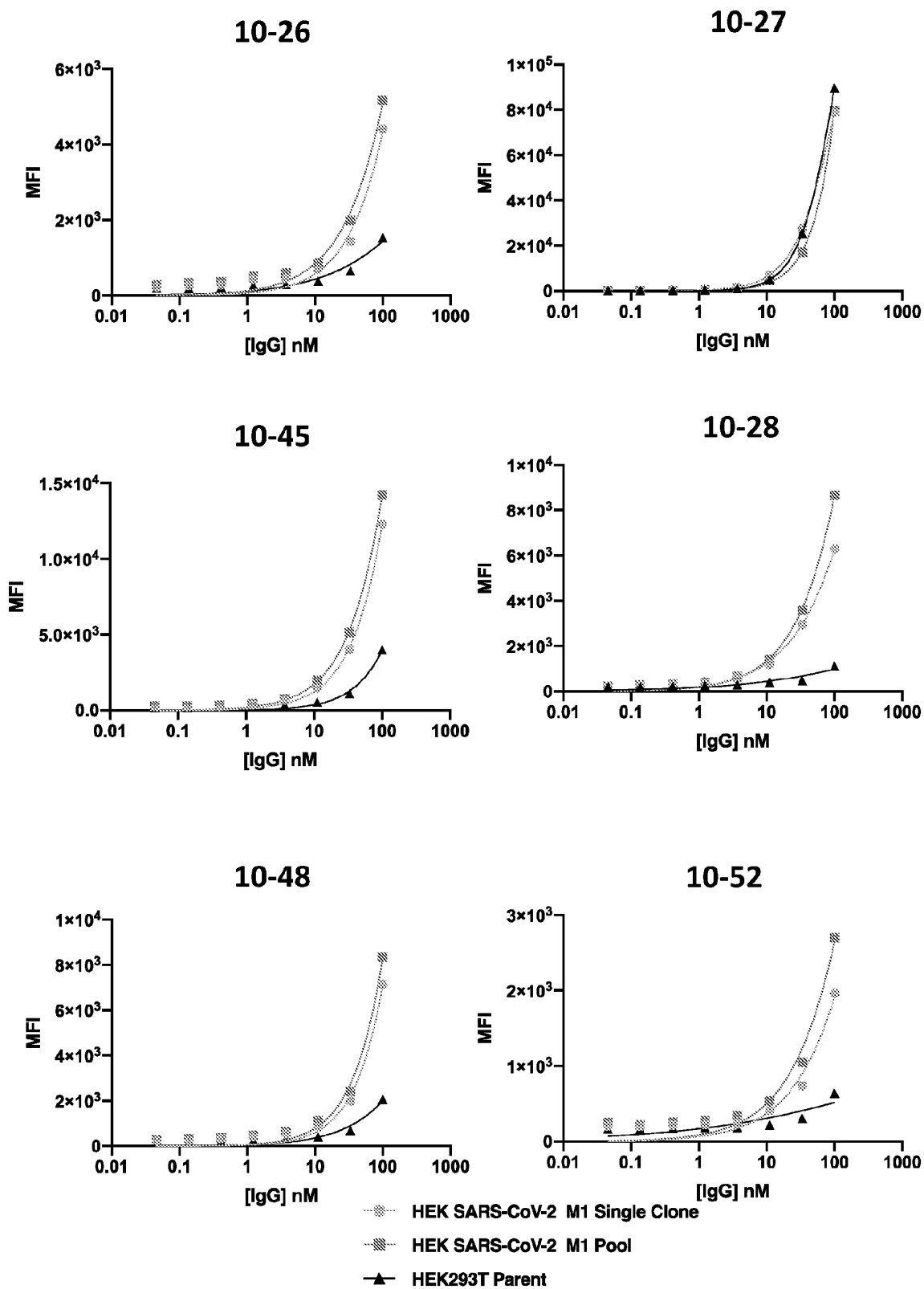


FIG. 40A

**FIG. 40B**

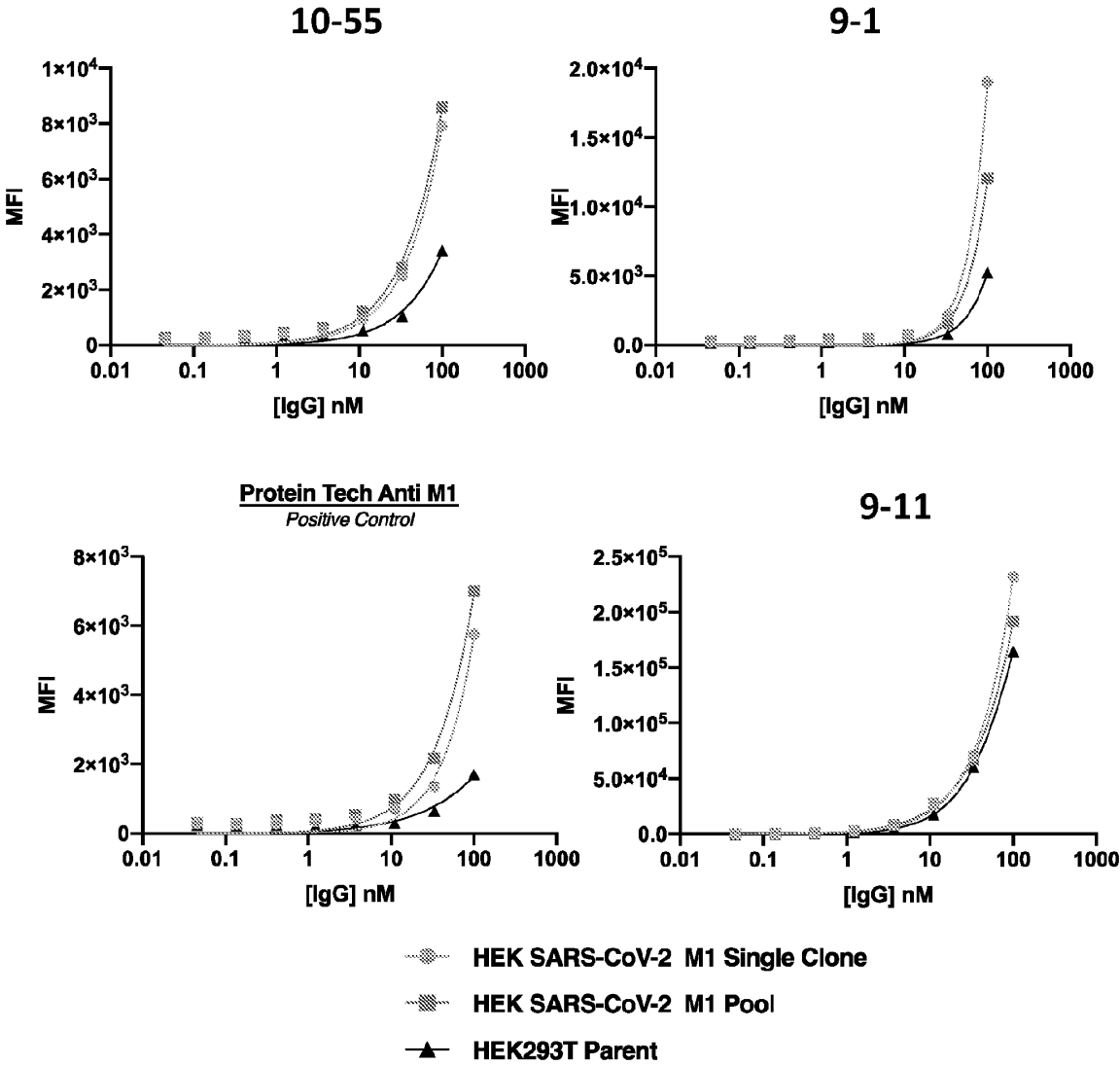


FIG. 40C

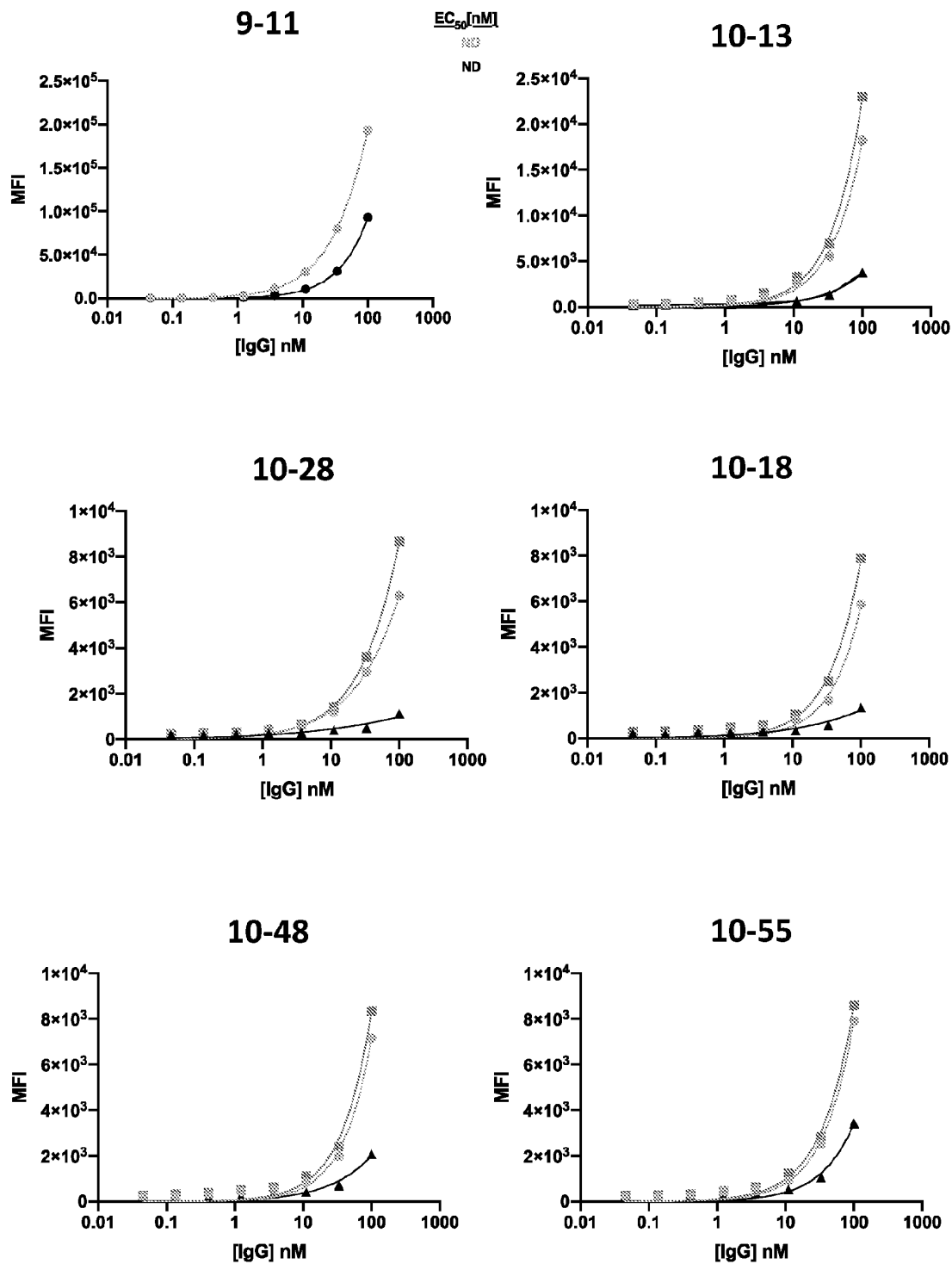


FIG. 40D

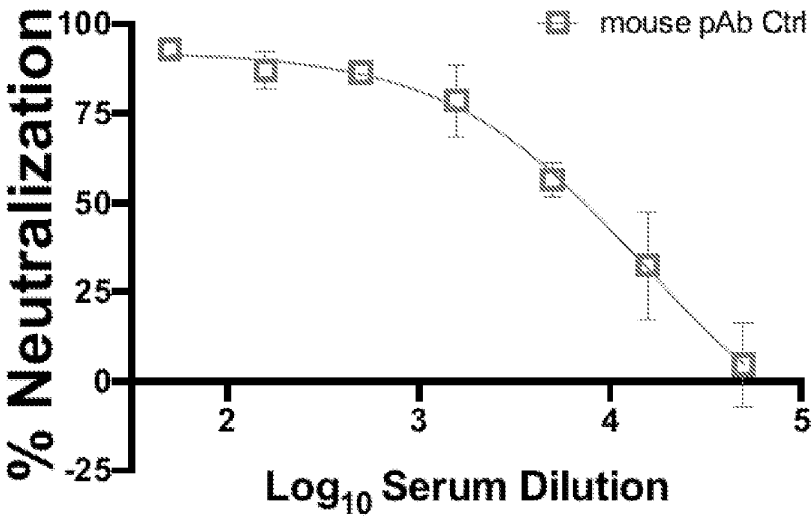


FIG. 41A

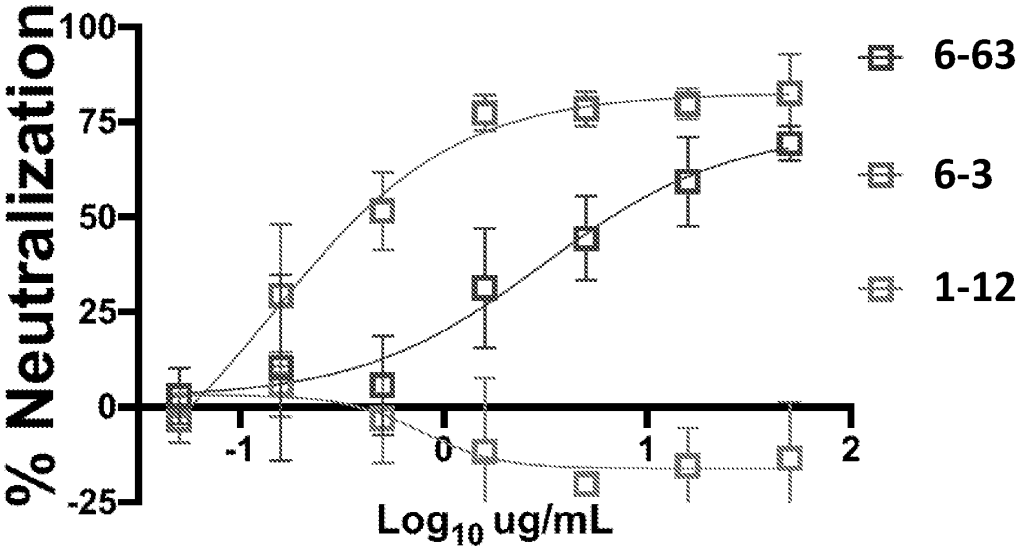


FIG. 41B

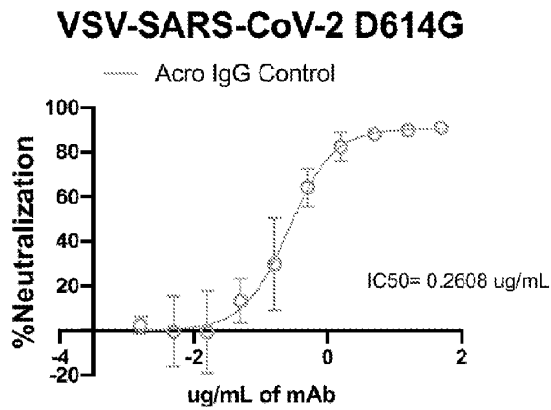


FIG. 42A

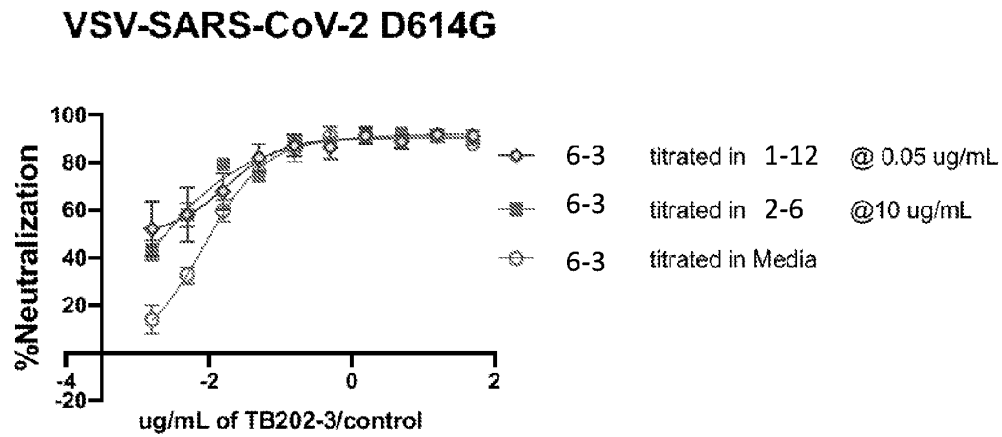


FIG. 42B

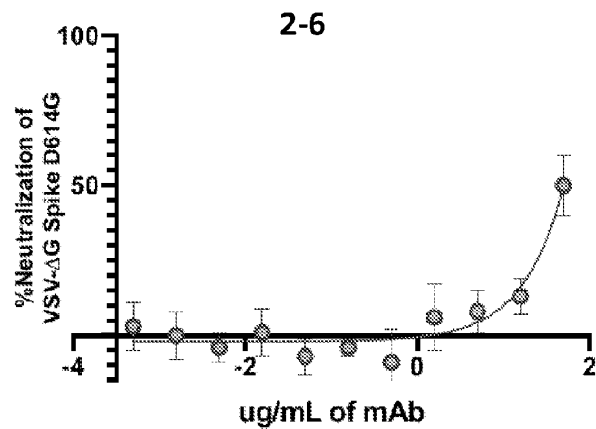


FIG. 42C

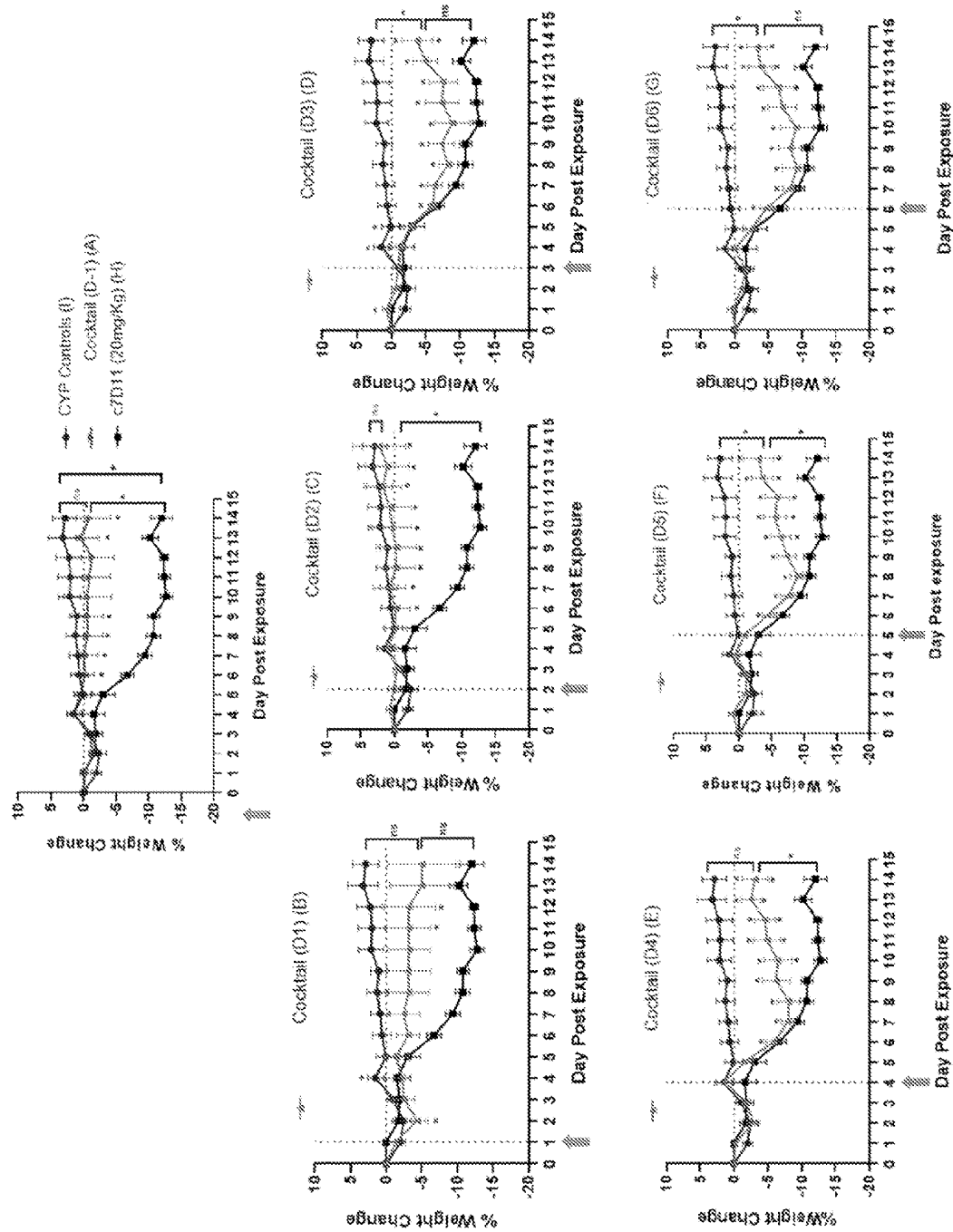


FIG. 43A

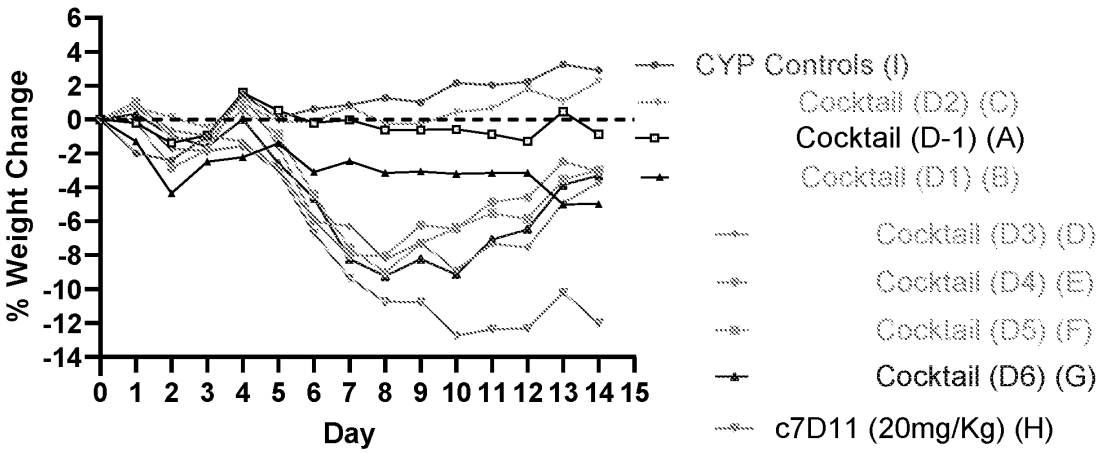


FIG. 43B

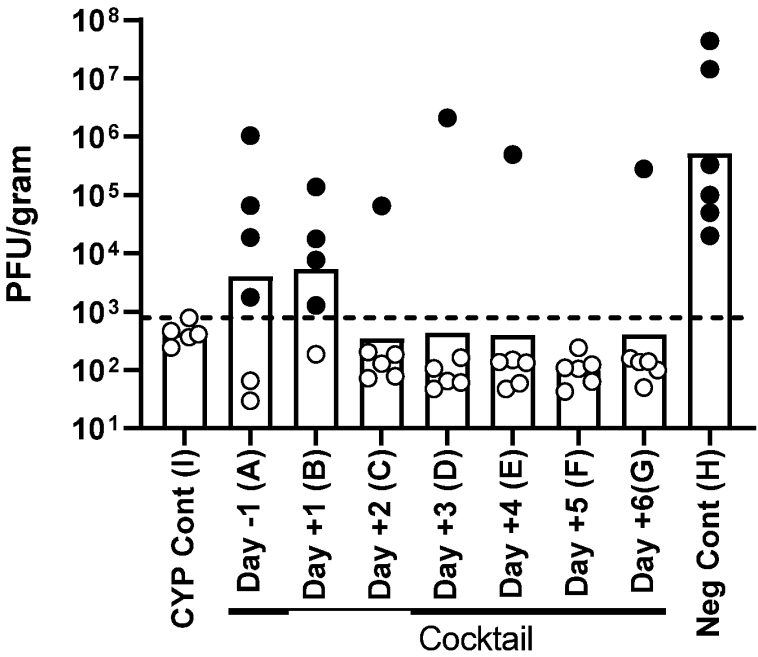


FIG. 43C

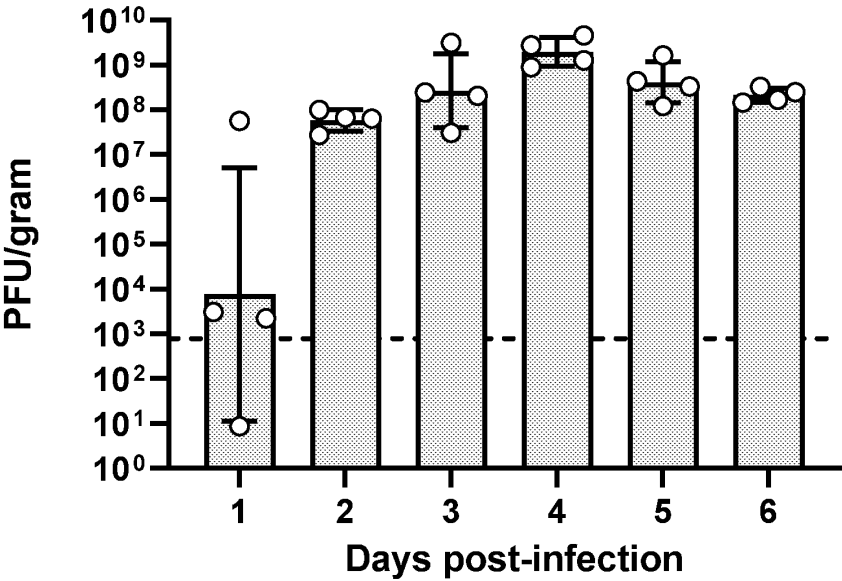


FIG. 43D