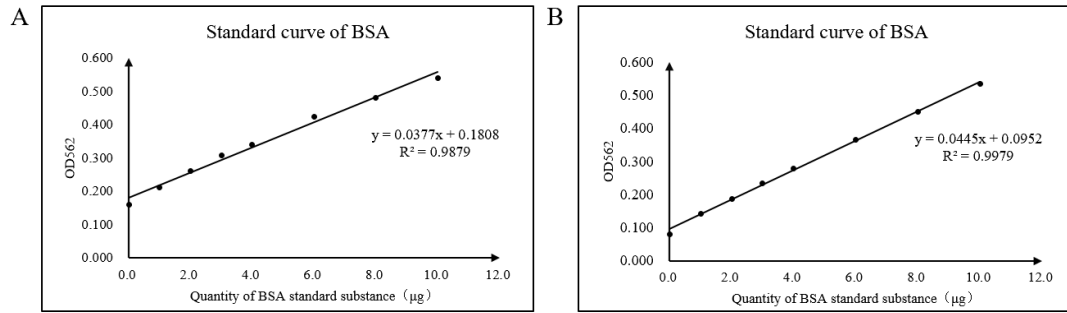
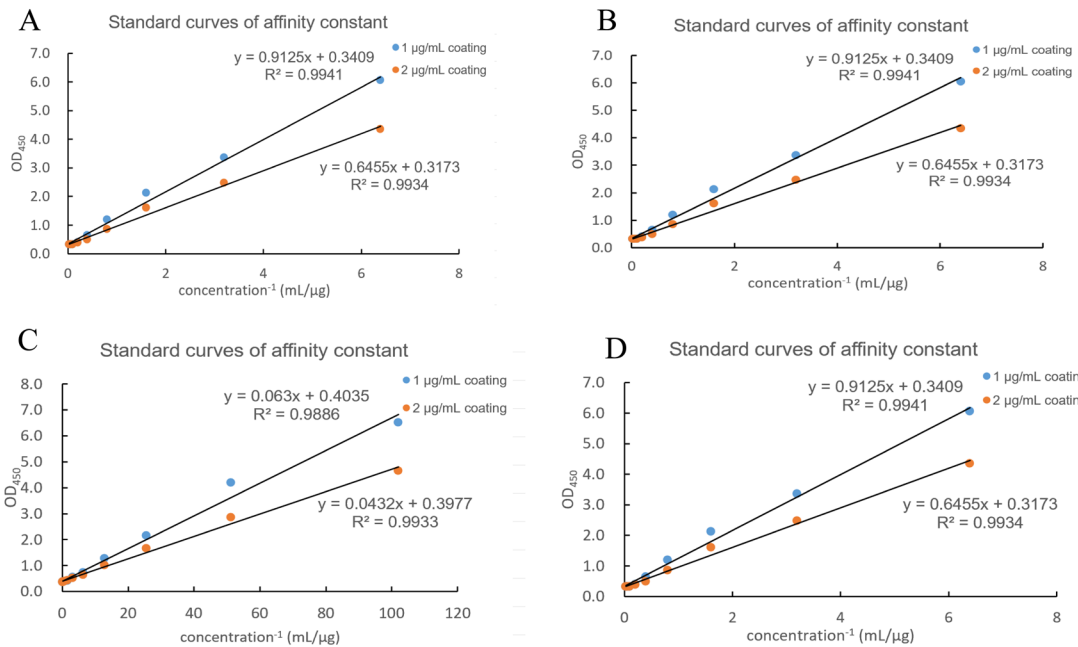


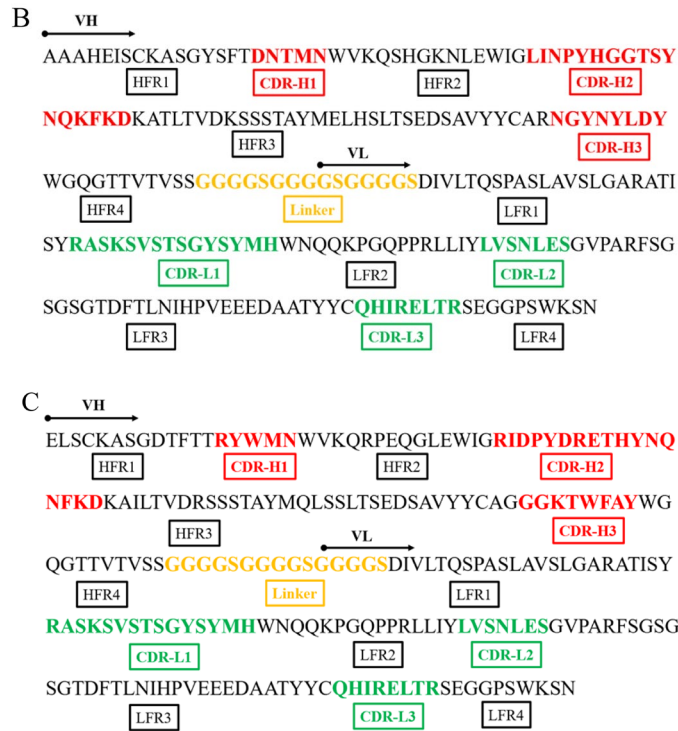


Supplementary figure S1. Standard curve of BSA for determination of the concentration of recombinant p22 protein and purified mAbs. (A) Standard curve of BSA for determination of the concentration of recombinant p22 protein; (B) Standard curve of BSA for determination of the concentration of purified mAbs.)



Supplementary figure S2. Regression curve of affinity determination of monoclonal antibodies. (A) mAbs 4D10; (B) mAbs 5C12; (C) mAbs 5G7; (D) mAbs 8G12.





Supplementary figure S3. Sequence of variable regions of monoclonal antibody. (A) mAbs 4D10 and 5C12; (B) mAb 5G7; (C) mAb 8G12.

Supplementary table S1. ASFV isolates involved in multiple sequence alignment in this study

No.	Isolate	Country	Genotype	Genome Accession	Protein ID of p22
1	BA71V			NC_001659	NP_042704
2	OURT88/3	Portugal	I	NC_044957	YP_009703612
3	Nu1979	Italy	I	MW723481	UCX48452
4	CAM1994/1	Cameroon	I	OR387520	WNK21936
5	LO2018	Italy	I	MW647171	UFQ11170
6	K49	Zaire	I	MZ205520	QZK26688
7	19155_WB	Italy	I	OP312970	WFD50873
8	Georgia_2007/1	Georgia	II	NC_044959	YP_009927101
9	MAD/01/1998	Madagascar	II	OP781309	WLE29941
10	TAN/01/2001	Tanzania	II	QQ434234	WLE28849
11	MAL/04/2001	Malawi	II	OP781310	WLE30124
12	MOZ/01/2005	South Africa	II	OP781313	WLE30676
13	Stavropol_01/08	Russia	II	PQ672299	XNX60663
14	ZIM/2015	Zimbabwe	II	OP781311	WLE30308
15	Lv17/WB/Rieli	Latvia	II	OR863252	WPS70783
16	RSA/08/2019	South Africa	II	OP781312	WLE30492
17	MAL/19/Karonga	Malawi	II	MW856068	QXP49940
18	Nigeria-RV502	Nigeria	II	OP672342	WV29709

19	RWA/Rwamagana/2021	Rwanda	II	PQ375363	XOD29641
20	SY18	China	II	MH766894	WKD79495
21	China/2018/AnhuiXCGQ	China	II	MK128995	AYW33955
22	Lv17/WB/Rieli	Spain	II	OR863252	WPS70783
23	Kyiv/2016/131	Ukraine	II	MN194591	QED21542
24	POL/2015/Podlaskie	Poland	II	MH681419	XBC37021
25	Korea/pig/Yeoncheon1/ 2019	Korea	II	MW049116	UID85690
26	RSA_W1_1999	South Africa	IV	MN641876	QST87078
27	Spec_57	South Africa	VIII	MN394630	UCX48452
28	RWA/Musanze/2023	Tanzania	IX	PQ375362	XOD29481
29	RSA_2_2004	South Africa	XX	MN641877	QII88854
30	RSA_2_2008	South Africa	XXII	MN336500	QGM12789
31	Kaliningrad_18/WB-9734	Russia	unannotated	OM966721	UVH35866
32	Germany 2020/1	Germany	unannotated	LR899193	CAD7112493
33	Belgium 2018/1	Belgium	unannotated	LR536725	VFV47910
34	Timor-Leste/2019/1	Australia	unannotated	MW396979	QTE18856
35	Korea/CW714/2020	Korea	unannotated	OR162436	WMM66466
36	Korea/PC1432/2021	Korea	unannotated	OR180305	WMQ58278
