

Table S1 Related to Figure 1

High Binding	Position of amino acid									% of aPL Binding
	1	2	3	4	5	6	7	8	9	
1 Sequence	R	C	G	G	Y	Q	F	T	C	92.25
Volume	173.4	108.5	60.1	60.1	193.6	143.8	189.9	116.1	108.5	
Hydropathy	-4.5	2.5	-0.4	-0.4	-1.3	-3.5	2.8	-0.7	2.5	
2 Sequence	R	C	G	P	I	Q	F	R	C	98.6
Volume	173.4	108.5	60.1	112.7	116.1	143.8	189.9	173.4	108.5	
Hydropathy	-4.5	2.5	-0.4	-1.6	-0.7	-3.5	2.8	-4.5	2.5	
3 Sequence	R	M	V	I	S	Y	F	G	C	96
Volume	173.4	162.9	140	166.7	89	193.6	189.9	60.1	108.5	
Hydropathy	-4.5	1.9	4.2	4.5	-0.8	-1.3	2.8	-0.4	2.5	
4 Sequence	R	V	A	I	Q	D	F	T	C	98
Volume	173.4	140	88.6	166.7	143.8	111.1	189.9	116.1	108.5	
Hydropathy	-4.5	4.2	1.8	4.5	-3.5	-3.5	2.8	-0.7	2.5	
5 Sequence	R	A	G	G	N	N	F	I	C	108.25
Volume	173.4	88.6	60.1	60.1	114.1	114.1	189.9	166.7	108.5	
Hydropathy	-4.5	1.8	-0.4	-0.4	-3.5	-3.5	2.8	4.5	2.5	
6 Sequence	R	C	L	I	D	Q	F	R	C	92.5
Volume	173.4	108.5	166.7	166.7	111.1	143.8	189.9	173.4	108.5	
Hydropathy	-4.5	2.5	3.8	4.5	-3.5	-3.5	2.8	-4.5	2.5	
7 Sequence	R	I	L	F	S	S	F	L	C	115.75
Volume	173.4	166.7	166.7	189.9	89	89	189.9	166.7	108.5	
Hydropathy	-4.5	4.5	3.8	2.8	-0.8	-0.8	2.8	3.8	2.5	
8 Sequence	R	G	G	M	R	K	F	L	C	100
Volume	173.4	60.1	60.1	162.9	173.4	168.6	189.9	166.7	108.5	
Hydropathy	-4.5	-0.4	-0.4	1.9	-4.5	-3.9	2.8	1.8	2.5	
Weak Binding	Position of amino acids									% of aPL Binding
	1	2	3	4	5	6	7	8	9	
1 Sequence	R	C	P	P	I	K	F	Q	C	72.25
Volume	173.4	108.5	112.7	112.7	116.1	168.6	189.9	143.8	108.5	
Hydropathy	-4.5	2.5	-1.6	-1.6	-0.7	-3.9	2.8	-3.5	2.5	
2 Sequence	R	C	W	L	D	D	F	N	C	80.5
Volume	173.4	108.5	227.8	166.7	111.1	111.1	189.9	114.1	108.5	
Hydropathy	-4.5	2.5	-0.4	1.8	-3.5	-3.5	2.8	-3.5	2.5	
3 Sequence	R	F	P	L	E	S	F	H	C	71.25
Volume	173.4	189.9	112.7	166.7	138.4	89	189.9	153.2	108.5	
Hydropathy	-4.5	2.8	-1.6	3.8	-3.5	-0.8	2.8	-3.2	2.5	
4 Sequence	R	I	L	G	E	I	F	R	C	67.75
Volume	173.4	166.7	166.7	60.1	138.4	116.1	189.9	173.4	108.5	
Hydropathy	-4.5	4.5	3.8	-0.4	-3.5	-0.7	2.8	-4.5	2.5	
5 Sequence	R	V	P	L	K	I	F	Y	E	74
Volume	173.4	140	112.7	166.7	168.6	116.1	189.9	193.6	138.4	
Hydropathy	-4.5	4.2	-1.6	3.8	-3.9	-0.7	2.8	-1.3	-3.5	
6 Sequence	R	C	G	A	H	E	F	Q	C	71.75
Volume	173.4	108.5	60.1	88.6	153.2	138.4	189.9	143.8	108.5	
Hydropathy	-4.5	2.5	-0.4	1.8	-3.2	-3.5	2.8	-3.5	2.5	
7 Sequence	R	I	I	G	E	I	F	H	C	71.25
Volume	173.4	166.7	166.7	60.1	138.4	116.1	189.9	153.2	108.5	
Hydropathy	-4.5	4.5	4.5	-0.4	-3.5	-0.7	2.8	-3.2	2.5	
8 Sequence	R	C	L	A	D	E	F	K	C	76.5
Volume	173.4	108.5	166.7	88.6	111.1	138.4	189.9	168.6	108.5	
Hydropathy	-4.5	2.5	3.8	1.8	-3.5	-3.5	2.8	-3.9	2.5	

Red color = non-polar amino acids; green color = polar amino acids; Violet = Phenylalanine residue

Unity of Volume = Å³ / Unity of Hydropathy = hydropathy index

% of aPL binding is relative to epitope R39-R43

Table S2 Related to Figure 1

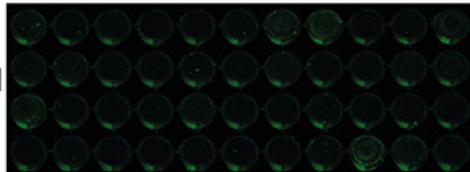
Amino acid	Abbreviations		Volume (Å ³) ¹	Hydropathy index ²
Alanine	<u>Ala</u>	A	88.6	1.8
Arginine	<u>Arg</u>	R	173.4	-4.5
Asparagine	<u>Asn</u>	N	114.1	-3.5
Aspartic acid	<u>Asp</u>	D	111.1	-3.5
Cysteine	<u>Cys</u>	C	108.5	2.5
Glutamine	<u>Gln</u>	Q	143.8	-3.5
Glutamic Acid	<u>Glu</u>	E	138.4	-3.5
Glycine	<u>Gly</u>	G	60.1	-0.4
Histidine	<u>His</u>	H	153.2	-3.2
Isoleucine	<u>Ile</u>	I	166.7	4.5
Leucine	<u>Leu</u>	L	166.7	3.8
Lysine	<u>Lys</u>	K	168.6	-3.9
Methionine	<u>Met</u>	M	162.9	1.9
Phenylalanine	<u>Phe</u>	F	189.9	2.8
Proline	<u>Pro</u>	P	112.7	-1.6
Serine	<u>Ser</u>	S	89.0	-0.8
Threonine	<u>Thr</u>	T	116.1	-0.7
Tryptophan	<u>Trp</u>	W	227.8	-0.9
Tyrosine	<u>Tyr</u>	Y	193.6	-1.3
Valine	<u>Val</u>	V	140.0	4.2

¹From Zamyatnin, , *Prog. Biophys. Mol. Biol.*, 1972; ²Kyte and Doolittle, *J. Mol. Biol.*, 1982

A

Protein Array

Plasma ctl
(1/1000)



Plasma APS patients
(1/1000)

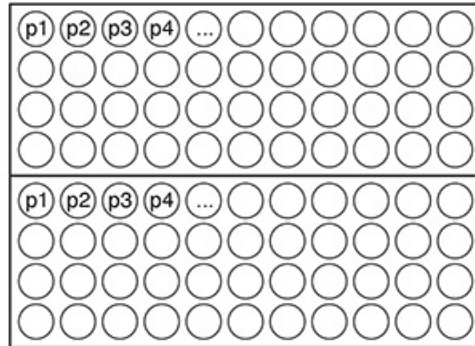
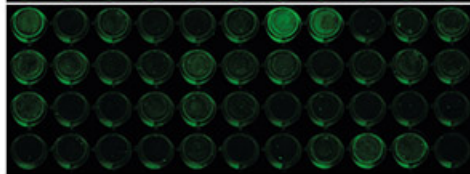


Figure S1 : Representative Scan of Protein Array. A) Scan from Streptavidin plate coated with 44 peptides of the biotinylated library.