

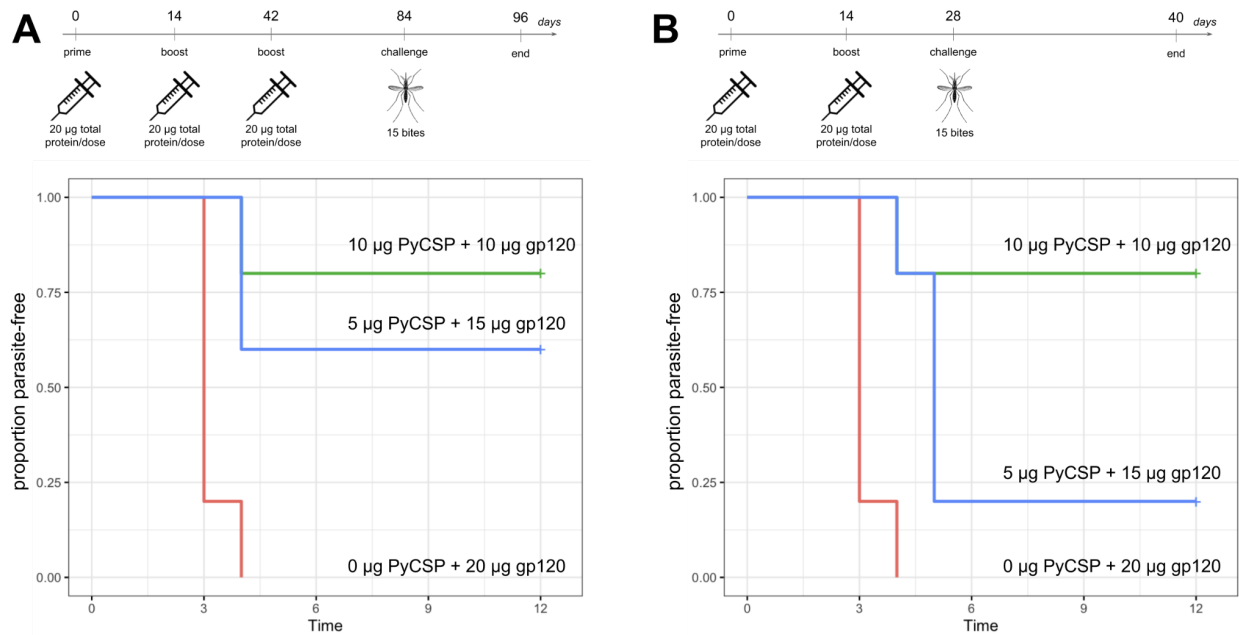
1 Supplementary Information

2 Supplementary Tables

3 *Supplementary Table 1. Individual challenge experiment outcomes*

group	condition	Experiment (protected/total)						Total (protected/total)
		1	2	3	4	5	6	
A	gp120	0/5	0/5	0/5	0/5	0/5	0/5	0/30
B	gp120+PyCSP	1/5	1/5	2/5	0/5	1/5	1/5	6/30
C	PyHSP70-2+PyCSP		3/5		4/10		3/5	10/20
D	PyTRAP+PyCSP		3/5		4/10		3/5	10/20
E	PyCeITOS+PyCSP	4/5		2/5		2/5		8/15
F	PyP52+PyCSP		2/5	3/5		2/5		7/15
G	PyP36+PyCSP		1/5			1/5		2/10
H	PyGAMA+PyCSP	0/5					2/4	2/9
I	PySSP3+PyCSP	2/5				1/5		3/10
J	PyTRSP+PyCSP	2/5					2/5	4/10

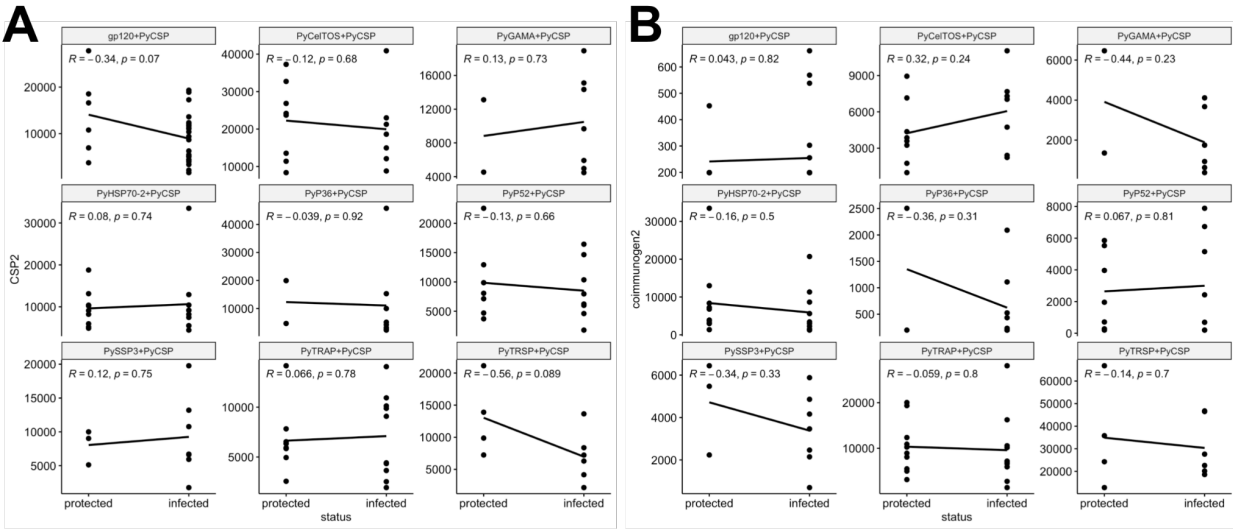
5 Supplementary Figures



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7 *Supplementary Figure 1. Testing the CSP dose and immunization numbers to achieve*
8 *the sub-optimal sterile protection.*

9 Groups of mice (n=5) were immunized with the indicated amount of PyCSP per dose together
10 with the gp120 control protein to achieve 20 µg of total protein content per injection. **(A)** shows a
11 3-dose regimen, followed by the challenge. **(B)** shows a 2-dose regimen, followed by the
12 challenge.

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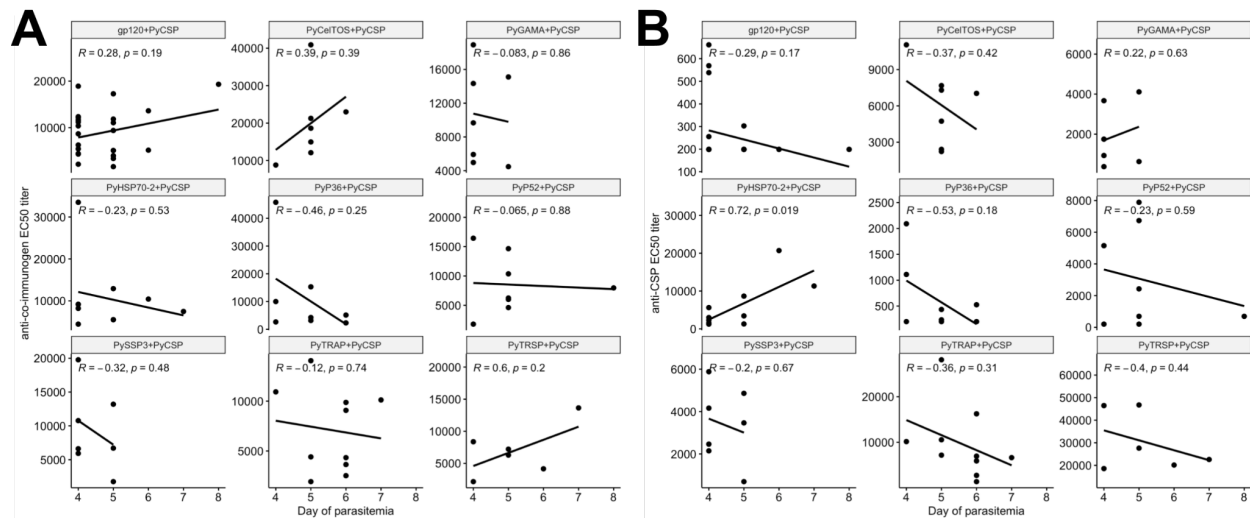
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16 *Supplementary Figure 2. Correlation analysis of the Ab titers with the status of*
 17 *protection.*

18 Pearson correlation analysis against protection status using **(A)** the anti-PyCSP Ab titers
 19 (represented by EC50 values) or **(B)** the anti-co-immunogen Ab titers (represented by EC50
 20 values).

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24 *Supplementary Figure 3. Correlation analysis of the Ab titers with the day to blood*
 25 *patency.*

26 Pearson correlation analysis against first day of detectable parasitemia using (A) the anti-PyCSP
 27 Ab titers (represented by EC50 values) or (B) the anti-co-immunogen Ab titers (represented by
 28 EC50 values).

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