

Table S1. Serum potency and inhibition rate in mice.

Immunization cycle	Dilution of immunogen (Serum dilution)	1×10^3			2×10^3			4×10^3			8×10^3		
		C	I	IR	C	I	IR	C	I	IR	C	I	IR
Third immunization	4×10^3	3.4987	0.6147	82%	3.2217	0.4268	87%	1.957	0.2932	85%	1.0275	0.273	73%
	8×10^3	2.0517	0.3646	82%	1.4623	0.2116	86%	1.0487	0.2047	80%	0.5481	0.1797	67%
	16×10^3	1.3106	0.2041	84%	0.9662	0.1787	82%	0.7009	0.1313	81%	0.3971	0.1131	72%
	32×10^3	0.7766	0.1608	79%	0.4838	0.1299	73%	0.3656	0.1268	65%	0.2269	0.1149	49%
Immunization cycle	Dilution of immunogen (Serum dilution)	1×10^3			2×10^3			4×10^3			8×10^3		
		C	I	IR	C	I	IR	C	I	IR	C	I	IR
Fourth immunization	16×10^3	3.3663	0.4319	87%	3.3583	0.3121	91%	2.7764	0.2348	92%	1.9664	0.1995	90%
	32×10^3	3.1291	0.2163	93%	2.6928	0.1715	94%	1.7124	0.1501	91%	1.2114	0.1324	89%
	64×10^3	1.6764	0.1533	91%	1.4977	0.139	91%	1.0592	0.1256	88%	0.6699	0.1231	82%
	128×10^3	1.1354	0.1301	89%	0.9073	0.1271	86%	0.5824	0.1042	82%	0.3814	0.1043	73%

Note: “C” represents control wells, “I” represents inhibition wells, and “IR” represents inhibition rate. The inhibitory concentration of ATR was 1000 ng/mL.

Table S2. Serum titer and inhibition rate of mice for the fusion experiment.

Dilution of immunogen	1×10³			2×10³			4×10³		
Dilution of Serum	C	I	IR	C	I	IR	C	I	IR
2×10³	3.6755	0.5255	85.70%	3.7644	0.5594	85.14%	3.5861	0.474	86.78%
4×10³	2.5767	0.3082	88.04%	2.4852	0.3242	86.95%	2.5613	0.3231	87.39%
8×10³	1.0701	0.1984	81.46%	1.1349	0.2317	79.58%	1.0939	0.1998	81.74%
1.6×10⁴	0.5978	0.2041	65.86%	0.5028	0.1911	61.99%	0.5897	0.2128	63.91%
3.2×10⁴	0.3286	0.176	46.44%	0.3683	0.1781	51.64%	0.3518	0.184	47.70%
6.4×10⁴	0.4051	0.2612	35.52%	0.3473	0.3122	10.11%	0.3912	0.2938	24.90%
1.28×10⁵	0.2482	0.2672	-7.66%	0.2661	0.2283	14.21%	0.2624	0.2424	7.62%
2.56×10⁵	0.5585	0.1388	75.15%	0.5693	0.1429	74.90%	0.5725	0.1235	78.43%
Dilution of immunogen	8×10³			1.6×10⁴			3.2×10⁴		
(Serum dilution times)	C	I	IR	C	I	IR	C	I	IR
2×10³	3.7084	0.4723	87.26%	3.5442	0.5299	85.05%	3.6483	0.5562	84.75%
4×10³	2.4955	0.3956	84.15%	2.3486	0.4081	82.62%	2.7125	0.8551	68.48%
8×10³	1.2335	0.2933	76.22%	1.3561	0.2508	81.51%	1.4674	0.2825	80.75%
1.6×10⁴	0.5945	0.2485	58.20%	0.6571	0.2718	58.64%	0.6988	0.1786	74.44%
3.2×10⁴	0.3317	0.2797	15.68%	0.4686	0.3348	28.55%	0.3682	0.1776	51.77%
6.4×10⁴	0.3813	0.3515	7.82%	0.4456	0.3958	11.18%	0.423	0.3017	28.68%
1.28×10⁵	0.3321	0.3083	7.17%	0.2771	0.4234	-52.80%	0.2685	0.2207	17.80%
2.56×10⁵	0.6379	0.2572	59.68%	0.7063	0.2009	71.56%	0.5793	0.161	72.21%

Note: “C” represents control wells, “I” represents inhibition wells, and “IR” represents inhibition rate. The concentration of the coating substance was 1 mg/mL. The inhibitory concentration of prometryn was 1000 ng/mL.

Table S3. Optimal ic-ELISA combination of coated antigen and antibody.

Dilution of immunogen	1×10³			2×10³		
Dilution of Serum	C	I	IR	C	I	IR
2×10³	3.8036	0.0981	97%	3.4246	0.0828	98%
4×10³	3.3319	0.0819	98%	2.8464	0.0725	97%
8×10³	2.2213	0.074	97%	1.6744	0.0699	96%
1.6×10⁴	1.2133	0.0724	94%	0.9525	0.0788	92%
3.2×10⁴	0.8439	0.0709	92%	0.4457	0.0664	85%
Dilution of immunogen	4×10³			8×10³		
(Serum dilution times)	C	I	IR	C	I	IR
2×10³	2.1325	0.0622	97%	1.0654	0.0695	93%
4×10³	1.2547	0.0652	95%	0.6322	0.0646	90%
8×10³	0.6402	0.0627	90%	0.3649	0.0641	82%
1.6×10⁴	0.349	0.065	81%	0.1867	0.0623	67%
3.2×10⁴	0.2048	0.06	71%	0.138	0.062	55%

Note: “C” represents control wells, “I” represents inhibition wells, and “IR” represents inhibition rate. The concentration of the coating agent was 1 mg/mL. The inhibitory concentration of prometryn was 1000 ng/mL.