

Fig. 1S. Hydrosalpinx scores from mice intramuscularly immunized with buffer or irrelevant antigen with/without adjuvants (-ve, n=60, black open triangle) versus mice with chlamydial antigens (n=5 x 23, pink open triangle)

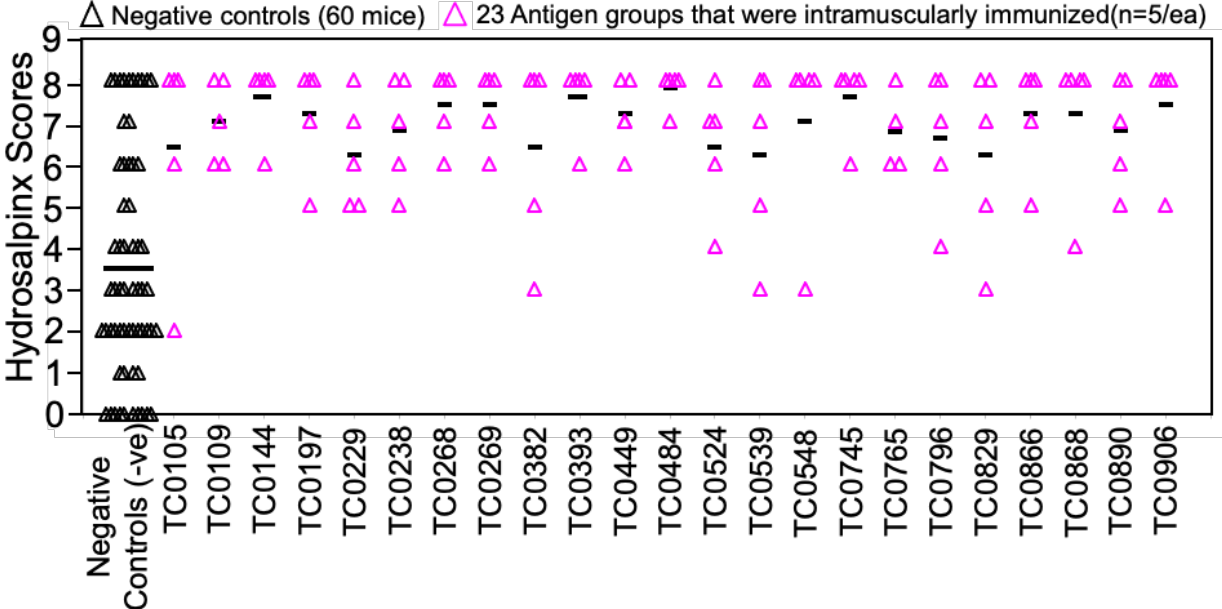


Fig.1S legend: The hydrosalpinx scores from the 60 negative immunization control mice from Fig.3 were shown in black open triangles here and those from mice intramuscularly immunized with each of 23 chlamydial antigens listed along the X-axis were shown in pink open triangles. Note that hydrosalpinx scores from each of the 23 antigen groups were significantly higher than that of the negative immunization control mice (2-tailed Wilcoxon, $p < 0.05$).

Table 1S: Vaginal chlamydial burdens and hydrosalpinx scores from antigen groups reported in the current manuscript.

Table 1S. Vaginal chlamydial burdens and oviduct hydrosalpinx scores of mouse groups reported in the current manuscript

Immunization regimen	Adjuvant	Sample size	Group ID/Antigen (CT ORF)	Log10IFU in AUC (Mean ± SD)	Hydrosalpinx Score (Mean ± SD)	Experimental ID	
Intramuscular Immunization Regimen							
IM+IM+IM	None	5	PBS	2.28 ± 0.56	2.8 ± 2.95	VacExp 3	Negative Control
IM+IM+IM	(CpG-IFA) x 3	5	PBS	1.93 ± 0.69	1.2 ± 1.1	VacExp 1	
IM+IM+IM	(CpG-IFA) x 3	5	GST (shedding monitored for 40 days)	2.59 ± 0.77	4 ± 4	VacExp 3	
IM+IM+IM	(CpG-IFA) x 3	30	GST (From 6 expts with similar conditions)	2.96 ± 0.79	3.83 ± 2.57	VacExp 6, 7, 9A, 10, 11, 12	
IM+IM+IM	(CpG-IFA) x 3	10	GST (Bead complex used)	2.73 ± 0.79	3.9 ± 3.03	VacExp 6	
IM+IM+IM	(DDA-TDB) x 3	5	GST	2.98 ± 0.56	3.6 ± 2.7	VacExp 6	
IM+IM+IM	(CpG-IFA) x 3	5	GST (Bead complex used, non-infection ctrl)	0 ± 0	0 ± 0	VacExp 6	Positive Control
IM+IM+IM	(CpG-IFA) x 3	5	Live CM (shedding monitored for 30 days)	0.41 ± 0.32	0.4 ± 0.55	VacExp 1	
IM+IM+IM	(CpG-IFA) x 3	5	Live CM (shedding monitored for 40 days)	0.89 ± 0.37	1.4 ± 1.67	VacExp 3	
IM+IM+IM	(CpG-IFA) x 3	20	Live CM (From 4 expts with similar conditions)	1.40 ± 0.29	3.4 ± 3.03	VacExp 6, 10, 11, 12	
IM+IM+IM	(CpG-IFA) x 3	15	UV-CM (Combined from 3 expts)	1.92 ± 0.53	2.67 ± 2.61	VacExp 7, 9A, 10	
IM+IM+IM	(CpG-IFA) x 3	5	nMOMP (extracted from CM)	1.44 ± 0.23 (p<0.05)	1.2 ± 0.84 (p=0.2116)	VacExp 3	
IM+IM+IM	(CpG-IFA) x 3	5	pCM03 (pCT03)	2.86 ± 1.07	4.2 ± 1.79	VacExp 7	
IM+IM+IM	(CpG-IFA) x 3	9	TC0003 (CT635) (Combined from 2 expts)	3.03 ± 0.92	5.33 ± 2.96	VacExp 7, 9A	
IM+IM+IM	(CpG-IFA) x 3	5	TC0035c (CT664c)	3.12 ± 0.63	4.8 ± 1.79	VacExp 7	
IM+IM+IM	(CpG-IFA) x 3	5	TC0037 (CT666)	3.36 ± 0.63	4.4 ± 3.05	VacExp 6	
IM+IM+IM	(CpG-IFA) x 3	5	TC0038 (CT667)	2.39 ± 0.47	3.6 ± 2.3	VacExp 10	
IM+IM+IM	(CpG-IFA) x 3	5	TC0041 (CT670)	3.36 ± 0.54	3.4 ± 2.97	VacExp 12	
IM+IM+IM	(CpG-IFA) x 3	5	TC0044 (CT673)	3.08 ± 0.67	1.6 ± 0.55	VacExp 1	
IM+IM+IM	(CpG-IFA) x 3	5	TC0047 (CT676)	2.57 ± 0.46	4.6 ± 3.29	VacExp 10	
IM+IM+IM	(CpG-IFA) x 3	4	TC0066 (CT694)	2.54 ± 0.34	2 ± 1.41	VacExp 1	
IM+IM+IM	(CpG-IFA) x 3	5	TC0070 (CT698)	2.81 ± 1.00	2.6 ± 2.41	VacExp 6	
IM+IM+IM	(CpG-IFA) x 3	5	TC0093 (CT720)	3.34 ± 0.41	6 ± 1.87	VacExp 12	
IM+IM+IM	(CpG-IFA) x 3	5	TC0105 (CT732)	3.00 ± 0.43	8.4 ± 2.61 (p<0.05)	VacExp 10	
IM+IM+IM	(CpG-IFA) x 3	5	TC0109 (CT736)	2.81 ± 0.58	7 ± 1 (p<0.05)	VacExp 11	
IM+IM+IM	(CpG-IFA) x 3	5	TC0140 (CT759)	3.17 ± 1.00	4.2 ± 2.86	VacExp 3	
IM+IM+IM	(CpG-IFA) x 3	5	TC0143 (CT762) (Bead complex used)	2.70 ± 1.09	3.6 ± 2.51	VacExp 12	
IM+IM+IM	(CpG-IFA) x 3	5	TC0144 (CT763)	2.74 ± 0.36	7.6 ± 0.89 (p<0.05)	VacExp 11	
IM+IM+IM	(CpG-IFA) x 3	5	TC0152 (CT771)	2.71 ± 0.08	3.2 ± 3.03	VacExp 10	
IM+IM+IM	(CpG-IFA) x 3	5	TC0153 (CT772)	2.55 ± 0.85	2.6 ± 1.82	VacExp 10	
IM+IM+IM	(CpG-IFA) x 3	5	TC0156 (CT775)	3.21 ± 0.34	3.8 ± 1.79	VacExp 10	
IM+IM+IM	(CpG-IFA) x 3	5	TC0172 (CT790)	2.58 ± 0.78	5.2 ± 2.39	VacExp 11	
IM+IM+IM	(CpG-IFA) x 3	5	TC0177 (CT795)	3.33 ± 0.41	3.6 ± 2.07	VacExp 3	
IM+IM+IM	(CpG-IFA) x 3	5	TC0181 (CT798)	2.84 ± 0.21	5.4 ± 2.88	VacExp 7	
IM+IM+IM	(CpG-IFA) x 3	5	TC0190 (CT806)	2.90 ± 0.90	3.2 ± 2.59	VacExp 11	
IM+IM+IM	(CpG-IFA) x 3	5	TC0197 (CT812) (Bead complex used)	2.72 ± 0.34	7.2 ± 1.3 (p<0.05)	VacExp 1	
IM+IM+IM	(CpG-IFA) x 3	5	TC0207 (CT820)	2.84 ± 0.54	4.2 ± 2.95	VacExp 9A	
IM+IM+IM	(CpG-IFA) x 3	10	TC0215 (CT828) (Combined from 2 expts)	2.97 ± 0.73	1.8 ± 2.74	VacExp 7, 10	
IM+IM+IM	(CpG-IFA) x 3	5	TC0229 (CT841)	2.32 ± 0.47	8.2 ± 1.3 (p<0.05)	VacExp 1	

IM+IM+IM	(CpG-IFA) x 3	5	TC0238 (CT849) (Bead complex used)	3.38 ± 0.81	6.8 ± 1.3 (p<0.05)	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0268 (CT875)	2.62 ± 0.54	7.4 ± 0.89 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0269 (CT001) (Bead complex used)	2.78 ± 0.58	7.4 ± 0.89 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0273 (CT005)	2.66 ± 0.43	5.6 ± 1.67	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0279 (CT011)	3.33 ± 0.57	4.6 ± 3.05	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0284 (CT016)	3.26 ± 0.45	6.2 ± 2.68	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0285 (CT017)	2.67 ± 0.31	1.4 ± 1.52	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0286 (CT018) (Bead complex used)	3.58 ± 0.60 (p<0.05)	6.2 ± 2.68	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0313 (CT043)	3.62 ± 0.68 (p<0.05)	1.4 ± 1.34	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0318 (CT048)	3.63 ± 0.65 (p<0.05)	3 ± 1.87	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0320 (CT050)	3.12 ± 0.56	5.6 ± 3.21	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0325 (CT055)	3.30 ± 0.56	3 ± 2.35	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0326 (CT056)	3.24 ± 0.50	4 ± 3.67	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0336 (CT066) (Bead complex used)	3.08 ± 0.48	1.6 ± 3.58	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0338 (CT067)	3.97 ± 0.56 (p<0.05)	3.4 ± 1.14	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0364 (CT089)	3.69 ± 0.57 (p<0.05)	3 ± 2.92	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0375 (CT099)	3.11 ± 0.38	3.2 ± 3.03	VacExp 10
IM+IM+IM	(DDA-TDB) x 3	5	TC0375 (CT099)	3.05 ± 0.56	3.4 ± 1.67	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0376 (CT101)	2.35 ± 0.60	3 ± 1	VacExp 1
IM+IM+IM	(CpG-IFA) x 3	5	TC0382 (CT105) (Bead complex used)	2.77 ± 0.52	6.4 ± 2.3 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0387 (CT111)	2.51 ± 0.65	3.4 ± 2.3	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0393 (CT117)	3.45 ± 0.22	7.6 ± 0.89 (p<0.05)	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0394 (CT118) (Bead complex used)	2.66 ± 0.57	4 ± 3.39	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0419 (CT142)	2.21 ± 0.73	3.75 ± 0.96	VacExp 1
IM+IM+IM	(CpG-IFA) x 3	5	TC0420 (CT143)	1.67 ± 0.43 (p<0.05)	2 ± 2.55	VacExp 1
IM+IM+IM	(CpG-IFA) x 3	4	TC0420 (CT143)	2.80 ± 0.49	3.5 ± 3.42	VacExp 3
IM+IM+IM	(CpG-IFA) x 3	5	TC0421 (CT144) (Bead complex used)	2.95 ± 0.39	5 ± 2.45	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0424 (CT147)	3.80 ± 0.16 (p<0.05)	5.2 ± 1.3	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0431 (CT153)	2.98 ± 0.39	2.8 ± 3.27	VacExp 3
IM+IM+IM	(CpG-IFA) x 3	5	TC0449 (CT177)	2.91 ± 0.59	7.2 ± 0.84 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0480 (CT208)	2.75 ± 0.60	5 ± 3	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0484 (CT212)	2.82 ± 0.42	7.8 ± 0.45 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0497 (CT226)	3.12 ± 0.61	5.2 ± 2.39	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0501 (CT230)	3.33 ± 0.99	6.2 ± 2.68	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0511 (CT240)	2.95 ± 0.71	4.2 ± 2.77	VacExp 3
IM+IM+IM	(CpG-IFA) x 3	5	TC0513 (CT242) (Bead complex used)	2.94 ± 0.82	5.8 ± 2.05	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	12	TC0519 (CT248) (Combined from 2 expts)	2.30 ± 0.67	1.83 ± 2.17	VacExp 6, 9A
IM+IM+IM	(CpG-IFA) x 3	5	TC0524 (CT253) (Bead complex used)	3.46 ± 0.40	6.4 ± 1.52 (p<0.05)	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0526 (CT255)	2.68 ± 0.11	3.6 ± 1.82	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	10	TC0531 (CT260) (Bead used & from 2 expts)	3.27 ± 0.58	5.5 ± 3.31	VacExp 7, 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0539 (CT268)	3.63 ± 0.46 (p<0.05)	6.2 ± 2.17 (p<0.05)	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0544 (CT272)	2.83 ± 0.61	5.4 ± 2.61	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0548 (CT276) (Bead complex used)	2.77 ± 0.37	7 ± 2.24 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0557 (CT284) (Bead complex used)	2.63 ± 0.25	5.6 ± 2.51	VacExp 12

IM+IM+IM	(CpG-IFA) x 3	5	TC0655 (CT376)	2.70 ± 0.89	6.2 ± 2.68	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0660 (CT381)	2.65 ± 0.82	3.4 ± 3.21	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0661 (CT382) (Bead complex used)	3.61 ± 0.58 (p<0.05)	6 ± 2.83	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	4	TC0675 (CT396)	2.92 ± 0.95	3.5 ± 1	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0695m (CT414)	2.53 ± 1.08	6 ± 1.41	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0704 (CT421) (Bead complex used)	2.90 ± 0.96	5.8 ± 2.17	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0715 (CT431)	2.94 ± 0.88	3.8 ± 3.11	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0727 (CT443)	2.32 ± 0.68	5.6 ± 0.89	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0735 (CT450)	2.96 ± 0.72	3.4 ± 2.97	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0743 (CT458)	3.54 ± 0.24 (p<0.05)	5.6 ± 2.07	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0745 (CT460)	2.98 ± 0.45	7.6 ± 0.89 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0757 (CT472)	3.09 ± 0.45	2.6 ± 1.34	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0761 (CT476)	3.00 ± 0.62	2 ± 2.35	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	4	TC0765 (CT480)	2.65 ± 0.33	8.75 ± 0.96 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0781 (CT494) (Bead complex used)	2.76 ± 0.35	6 ± 1.87	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0794 (CT507)	2.58 ± 0.41	4.2 ± 2.68	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0796 (CT509)	3.22 ± 0.44	6.6 ± 1.67 (p<0.05)	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0816n (CT529)	2.47 ± 0.57	4.2 ± 2.49	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0826 (CT539)	3.40 ± 0.40	3 ± 3.16	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0828 (CT541)	2.22 ± 0.87	2.2 ± 3.27	VacExp 3
IM+IM+IM	(CpG-IFA) x 3	4	TC0829 (CT542) (CT542 used)	2.98 ± 0.57	2 ± 1.83	VacExp 1
IM+IM+IM	(CpG-IFA) x 3	5	TC0829 (CT542)	3.13 ± 0.52	6.2 ± 2.17 (p<0.05)	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0844 (CT556)	3.14 ± 0.73	4 ± 2.24	VacExp 7
IM+IM+IM	(CpG-IFA) x 3	5	TC0848 (CT559)	3.37 ± 0.75	3 ± 3	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0862 (CT573)	3.50 ± 0.54 (p<0.05)	5.6 ± 1.82	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0866 (CT577)	2.60 ± 0.10	7.2 ± 1.3 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0868c (CT579)	3.05 ± 0.42	7.2 ± 1.79 (p<0.05)	VacExp 10
IM+IM+IM	(CpG-IFA) x 3	5	TC0873 (CT584)	3.04 ± 0.84	5.4 ± 2.88	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0877 (CT588)	3.51 ± 0.45 (p<0.05)	6.4 ± 3.58	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0890 (CT601) (Bead complex used)	3.37 ± 0.25	8.8 ± 1.3 (p<0.05)	VacExp 12
IM+IM+IM	(CpG-IFA) x 3	5	TC0906 (CT616)	2.91 ± 0.21	7.4 ± 1.34 (p<0.05)	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0908 (CT618) (Bead complex used)	2.85 ± 0.51	2.4 ± 2.88	VacExp 11
IM+IM+IM	(CpG-IFA) x 3	5	TC0909 (CT619)	2.69 ± 0.61	5.6 ± 2.61	VacExp 6
IM+IM+IM	(CpG-IFA) x 3	5	TC0912c (CT622)	2.60 ± 0.80	5 ± 4.12	VacExp 10

Intranasal Immunization Regimen

IN+IN+IN	None	7	PBS (shedding monitored for 28 days)	3.28 ± 0.82	2.43 ± 1.72	UTHSC/VacExp 2	Negative Control
IN+IN+IN	None	5	PBS (shedding monitored for 37 days)	1.73 ± 0.64	2.4 ± 2.41	VacExp 4	
IN+IN+IN	CpG x 3	5	PBS (shedding monitored for 27 days)	3.52 ± 0.26	No Pathology data	VacExp B	
IN+IN+IN	CpG x 3	5	PBS (shedding monitored for 37 days)	1.87 ± 0.81	2 ± 2	VacExp 2	
IN+IN+IN	CpG x 3	5	GST (shedding monitored for 28 days)	2.98 ± 1.20	2.6 ± 2.07	UTHSC/VacExp 2	
IN+IN+IN	CpG x 3	10	GST (shedding monitored for 30 days)	3.78 ± 0.53	3.9 ± 2.56	UTHSC VacExp 1	
IN+IN+IN	CpG x 3	5	GST (shedding monitored for 37 days)	2.93 ± 0.43	5 ± 2	VacExp 4	
IN+IN+IN	CpG x 3	10	PBS (no challenge infection control)	0 ± 0	0 ± 0	UTHSC/VacExp 2	
IN	None	5	Live CM 50 IFU (shedding for 28 days)	0.30 ± 0.28	0 ± 0	UTHSC/VacExp 2	

IN	None	10	Live CM 50 IFU (shedding for 30 days)	0.43 ± 0.28	0.8 ± 1.48	UTHSCVacExp 1	Positive Control	
IN	None	5	Live CM 50 IFU (shedding for 37 days)	0.51 ± 0.05	0.4 ± 0.89	VacExp 4		
IN	None	5	Live CM 500 IFU (shedding for 27 days)	0.64 ± 0.21	No Pathology data	VacExp B		
IN	None	1	Live CM 500 IFU (shedding for 37 days)	0.87 ± /	0 ± /	VacExp 2		
IN+IN+IN	CpG x 3	5	UV-CM (shedding monitored for 28 days)	3.53 ± 0.79	2.8 ± 3.35	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	10	UV-CM (shedding monitored for 30 days)	1.17 ± 0.69 (p<0.05)	1.8 ± 2.9	UTHSCVacExp 1		
IN+IN+IN	CpG x 3	10	UV-CM (Combined, shedding for 37 days)	2.75 ± 0.72	3.7 ± 2.75	VacExp 2, 4		
IN+IN+IN	CpG x 3	4	nMOMP (Extracted from CM)	2.52 ± 0.59	2 ± 1.41	VacExp 4		
IN+IN+IN	None	5	pCM03 (pCT03)	3.53 ± 0.70	3.4 ± 3.05	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	5	pCM03 (pCT03) (shedding for 27 days)	3.43 ± 0.27	No Pathology data	VacExp B		
IN+IN+IN	CpG x 3	10	pCM03 (pCT03) (shedding for 28 days)	3.51 ± 0.65	1.2 ± 1.87 (p<0.05)	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	10	pCM03 (pCT03) (shedding for 30 days)	3.55 ± 0.67	5.7 ± 2.71 (p<0.05)	UTHSCVacExp 1		
IN+IN+IN	CpG x 3	5	pCM03 (pCT03) (shedding for 37 days)	2.05 ± 0.54 (p<0.05)	1.2 ± 1.79 (p=0.085)	VacExp 4		
IN+IN+IN	CpG x 3	5	TC0038 (CT667)	3.29 ± 0.67	3 ± 2.45	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	5	TC0043 (CT672)	2.92 ± 1.00	5.8 ± 2.05 (p<0.05)	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	4	TC0067 (CT695)	2.87 ± 0.50	3.25 ± 3.2	VacExp 4		
IN+IN+IN	CpG x 3	5	TC0197m (CT812m)	3.30 ± 0.03	No Pathology data	VacExp B		
IN+IN+IN	CpG x 3	5	TC0207 (CT820)	2.22 ± 0.39	3 ± 2.24	VacExp 4		
IN+IN+IN	CpG x 3	5	TC0215 (CT828)	3.32 ± 0.93	2.8 ± 2.95	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	5	TC0215 (CT828 used)	2.08 ± 0.65	1.8 ± 2.05	VacExp 2		
IN+IN+IN	CpG x 3	5	TC0248 (CT858)	3.57 ± 0.40	No Pathology data	VacExp B		
IN+IN+IN	CpG x 3	5	TC0248Mut (CT858Mut-His used)	2.32 ± 0.17	3 ± 3.32	VacExp 2		
IN+IN+IN	CpG x 3	4	TC0248(CT858-His used)	2.15 ± 0.32	2.5 ± 1.73	VacExp 2		
IN+IN+IN	CpG x 3	5	TC0321 (CT051)	3.19 ± 0.63	3 ± 2.65	VacExp 4		
IN+IN+IN	CpG x 3	5	TC0323 (CT053)	2.89 ± 0.72	5.2 ± 3.83	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	5	TC0338 (CT067 used)	2.17 ± 0.62	1.4 ± 1.14	VacExp 2		
IN+IN+IN	CpG x 3	3	TC0499 (CT228) (2 died before infection)	3.31 ± 0.44	3.33 ± 4.16	VacExp 4		
IN+IN+IN	CpG x 3	5	TC0511 (CT240)	1.95 ± 0.54 (p<0.05)	4.6 ± 1.82	VacExp 2		
IN+IN+IN	CpG x 3	5	TC0519 (CT248)	2.88 ± 0.85	3.6 ± 4.1	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	5	TC0718 (CT434)	3.18 ± 0.99	2.8 ± 1.64	UTHSCVacExp 2		
IN+IN+IN	CpG x 3	5	TC0726 (CT442)	2.44 ± 0.82	3.8 ± 1.3	VacExp 2		
IN+IN+IN	CpG x 3	5	TC0727c-TC0248c (CT443c-CT858c)	3.45 ± 0.23	No Pathology data	VacExp B		
IN+IN+IN	CpG x 3	5	TC0741 (CT456)	3.31 ± 0.95	2.2 ± 3.19	VacExp 2		
IN+IN+IN	CpG x 3	4	TC0846 (CT557)	3.32 ± 0.77	3.5 ± 1.91	VacExp 4		
IN+IN+IN	CpG x 3	4	TC0891 (CT063 used)	2.36 ± 0.10	1.75 ± 1.71	VacExp 2		
IN+IN+IN	CpG x 3	5	TC0911 (CT621)	3.66 ± 0.40	6 ± 2.92 (p<0.05)	UTHSCVacExp 2		
Combinational Immunization Regimen								
IN+IM+IP	CpG+(CpG-IFA)x2	5	GST (5)	3.81 ± 0.58	4 ± 2.92	VacExp8		Negative Control
IN+IM+SC	CpG+(CpG-IFA)x2	5	GST (5)	3.54 ± 0.33	6 ± 2	VacExp 9B		
IN+IM	CpG+CpG-IFA	20	GST (Combined from 2 exps)	2.79 ± 0.44	4.65 ± 2.41	VacExp 13, 14		
IN+IM+IP	None+(CpG-IFA)x2	5	Live CM priming + (UV-CM)x2	0.41 ± 0.32	0 ± 0	VacExp8		Positive Control
IN+IM+SC	None+(CpG-IFA)x2	5	Live CM priming + (UV-CM)x2	1.63 ± 0.34	0.6 ± 0.89	VacExp 9B		
IN+IM	None+CpG-IFA	20	Live CM priming + UV-CM, (from 2 exps)	0.14 ± 0.28	0 ± 0	VacExp 13, 14		
IN+IM	CpG+CpG-IFA	10	pCM03 (pCT03) (pCT03 used)	2.84 ± 0.38	6 ± 2.83	VacExp 13		

IN+IM+IP	CpG+(CpG-IFA)x2	5	pCM03 (pCT03) (pCT03 used)	4.01 ± 0.44 (p<0.05)	2.6 ± 2.19	VacExp8
IN+IM	CpG+CpG-IFA	6	pCM03 (pCT03)	2.90 ± 0.57	5.67 ± 1.97	VacExp 14
IN+IM	CpG+CpG-IFA	6	pCM03s (pCT03s) (short form was used)	2.97 ± 0.54	5.67 ± 2.07	VacExp 14
IN+IM	CpG+CpG-IFA	10	TC0035c (CT664c)	2.86 ± 0.24	5.3 ± 1.83	VacExp 13
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0039 (CT668)	3.08 ± 0.55	5.2 ± 1.64	VacExp 9B
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0043 (CT672)	2.51 ± 0.73	0.8 ± 1.79 (p<0.05)	VacExp 9B
IN+IM	CpG+CpG-IFA	6	TC0052 (CT681)	2.71 ± 0.45	6.67 ± 0.82	VacExp 14
IN+IM	CpG+CpG-IFA	6	TC0052-pCM03c (CT681-pCT03c)	3.11 ± 0.34	6.5 ± 1.22	VacExp 14
IN+IM	CpG+CpG-IFA	6	TC0052c- pCM03c (CT681c-pCT03c)	2.39 ± 0.62 (p<0.05)	3.33 ± 2.16	VacExp 14
IN+IM	CpG+CpG-IFA	6	TC0052n-pCM03c (CT681n- pCT03c)	3.54 ± 0.21	4.83 ± 2.56	VacExp 14
IN+IM	CpG+CpG-IFA	9	TC0066 (CT694)	2.89 ± 0.46	6.78 ± 1.48 (p<0.05)	VacExp 13
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0075 (CT702)	3.18 ± 0.71	5 ± 3.16	VacExp8
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0079 (CT706)	3.50 ± 0.26	2.2 ± 2.49 (p<0.05)	VacExp8
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0151 (CT770)	2.26 ± 0.58 (p<0.05)	1.8 ± 1.3 (p<0.05)	VacExp 9B
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0171 (CT788)	3.75 ± 0.53 (p<0.05)	4 ± 2.92	VacExp8
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0199 (CT813)	2.86 ± 0.41	4.4 ± 2.51	VacExp 9B
IN+IM	CpG+CpG-IFA	10	TC0257 (CT866)	2.98 ± 0.48	6.4 ± 2.41	VacExp 14
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0316 (CT046)	3.34 ± 0.18	3.6 ± 3.29	VacExp8
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0323 (CT053)	2.61 ± 0.62	2.6 ± 2.41	VacExp 9B
IN+IM	CpG+CpG-IFA	10	TC0364 (CT089)	3.11 ± 0.42	5.1 ± 1.79	VacExp 13
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0375 (CT099)	2.42 ± 0.98	1.4 ± 2.19 (p<0.05)	VacExp8
IN+IM	CpG+CpG-IFA	10	TC0376 (CT100)	3.04 ± 0.47	6.6 ± 1.96 (p<0.05)	VacExp 13
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0386 (CT110)	3.15 ± 0.44	3 ± 3	VacExp8
IN+IM	CpG+CpG-IFA	10	TC0392 (CT116)	2.97 ± 0.42	5.1 ± 2.23	VacExp 14
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0392 (CT116)	3.32 ± 0.29	4.4 ± 3.29	VacExp8
IN+IM	CpG+CpG-IFA	10	TC0426 (CT149)	3.07 ± 0.49	5.6 ± 3.24	VacExp 13
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0453 (CT181)	2.26 ± 0.63 (p<0.05)	3 ± 4.12	VacExp 9B
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0596 (CT322)	2.54 ± 1.01	6.8 ± 2.17	VacExp8
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0604 (CT328)	3.38 ± 0.72	4 ± 2.45	VacExp8
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0652 (CT373)	3.20 ± 0.59	6 ± 3.46	VacExp 9B
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0677 (CT398)	3.02 ± 0.54	4.2 ± 3.9	VacExp 9B
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0683 (CT403)	3.51 ± 0.39	5.8 ± 2.68	VacExp 9B
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0707 (CT424)	2.54 ± 0.78	4.8 ± 3.63	VacExp 9B
IN+IM+SC	CpG+(CpG-IFA)x2	4	TC0718 (CT434)	2.40 ± 0.85	2 ± 2.83	VacExp 9B
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0727c-TC0248c (CT443c- CT858c)	3.43 ± 0.66	2.6 ± 1.52	VacExp8
IN+IM	CpG+CpG-IFA	5	TC0727c (CT443c)	2.64 ± 0.31 (p<0.05)	5.2 ± 1.69	VacExp 14
IN+IM	CpG+CpG-IFA	5	TC0727n (CT443n)	2.72 ± 0.74	5.14 ± 2.73	VacExp 14
IN+IM	CpG+CpG-IFA	5	TC0727n-pCM03c (CT443n- pCT03c)	3.07 ± 0.36	5.5 ± 1.52	VacExp 14
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0742 (CT457)	3.12 ± 0.86	4 ± 3.16	VacExp8
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0892 (CT603)	3.50 ± 0.51	1.2 ± 2.17 (p<0.05)	VacExp 9B
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0900 (CT610)	3.18 ± 0.48	2.6 ± 2.41	VacExp 9B
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0901 (CT611)	3.08 ± 1.22	4.8 ± 3.35	VacExp8
IN+IM+IP	CpG+(CpG-IFA)x2	5	TC0911 (CT621)	3.58 ± 0.44	2.4 ± 3.58	VacExp8
IN+IM+SC	CpG+(CpG-IFA)x2	5	TC0921 (CT632)	2.76 ± 0.75	3.2 ± 4.38	VacExp 9B

Table 1S note:

The data are organized into three different immunization regimens as listed in the 1st column, including intramuscular (top of Table 1S), intranasal (middle) and combinational (bottom). The corresponding adjuvants used for each group are listed in the 2nd column. CpG plus incomplete Freund's adjuvant (IFA) were used for intramuscular, intraperitoneal, and subcutaneous injections while CpG alone for intranasal inoculation with the exception that no adjuvant was used for intranasal inoculation with live chlamydial organisms. The sample size for each group is listed in the 3rd column. Mice with similar experimental conditions are combined into one group while those with different experimental conditions are kept in the original groups even though they were immunized with the same antigens. The group IDs and antigens used for immunizing

the corresponding groups are listed in the 4th column, which are from 17 different experiments as listed in the 7th column or last column. All negative (green) and positive (blue) immunization controls from the same immunization regimen are clustered on top of each immunization regimen. The negative controls were used to compare with individual antigen groups under the same regimen to identify antigen groups with statistically different chlamydial burden (5th column) and hydrosalpinx score (6th column). The chlamydial burden is listed as area-under-curves from each group. After ANNOVA analysis, a 2-tailed Wilcoxon Rank Sum test was used to do the comparison, which revealed both infection/pathology-reducing (red) and -enhancing/exacerbating (pink) antigens.