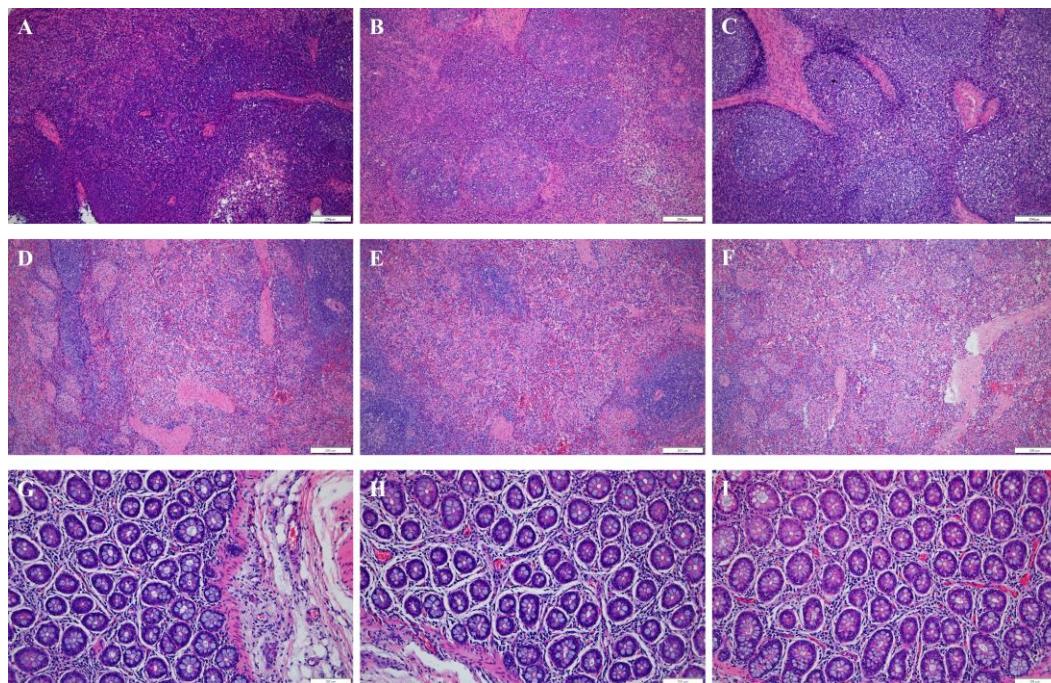
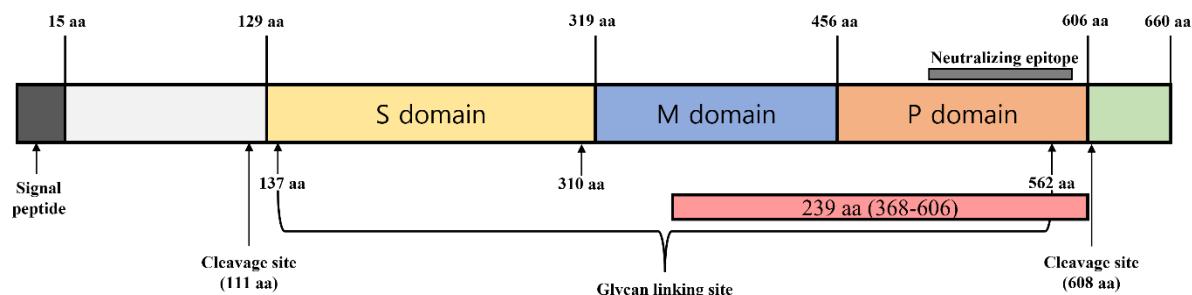


**Supplementary Materials:**



**Figure S1.** Histopathological lesions in abdominal organs: (A) to (C) mesenteric lymph node; (D) to (F) spleen; and (G) to (I) large intestine; (A), (D), and (G) show tissues from pigs in the negative control; (B), (E), and (H) show tissues from pigs in the positive control; (C), (F), and (I) show tissues form pigs in the vaccinated group.



**Figure S2.** Schematic diagram of HEV for VLP vaccine

Table S1. Determination of IL-12 levels in pigs

week	Negative control				Positive control				Vaccinated			
	1	2	3	4	5	6	7	8	9	10	11	12
0	0.90	0.95	1.00	1.22	0.96	1.02	0.98	0.84	0.93	1.25	1.24	1.17
2	0.75	0.83	0.84	0.91	1.16	0.97	0.81	1.25	0.79	0.91	0.95	0.87
4	0.75	0.78	1.11	0.80	1.22	1.01	1.04	3.01	2.20	2.37	2.99	3.78
6	0.85	1.13	0.94	0.83	0.91	1.20	0.84	1.01	1.14	0.99	1.21	1.13
8	0.94	1.13	0.73	0.83	0.77	0.95	1.05	1.28	1.19	0.85	0.83	1.27
10	1.13	1.16	0.74	1.22	0.88	0.81	1.23	0.74	1.19	1.15	0.74	1.18

Table S2. Determination of IFN- $\gamma$  levels in pigs

week	Negative control				Positive control				Vaccinated			
	1	2	3	4	5	6	7	8	9	10	11	12
0	22.74	23.98	30.47	34.43	39.06	23.44	24.64	32.90	22.73	33.94	22.35	37.92
2	34.56	31.66	25.38	31.10	36.00	37.92	33.31	34.74	26.05	38.69	35.12	24.28
4	29.09	36.24	25.03	40.45	24.49	25.78	40.71	142.59	152.08	145.83	136.83	156.72
6	25.78	27.25	21.85	26.61	31.95	38.82	32.38	90.77	126.68	109.84	125.86	129.90
8	34.65	25.75	38.01	37.87	29.14	27.37	35.71	20.59	40.13	22.37	38.47	39.84
10	37.82	37.22	35.68	40.62	38.58	20.67	38.62	34.51	29.99	28.27	20.45	22.17