

Fig. S1 Relative fold changes in viral copy number vs 18sRNA gene from the vaginal and anal lavage samples of normal nude mice. 30 μ l of 0.9% NaCl was used to wash the vaginal and anal canals of four nude female mice with a filtered tip three times. SYBR Green Q-PCR was conducted with DNA samples extracted from the vaginal and anal lavage. The difference in cycle time between viral DNA and 18s RNA gene (Δ Ct) was used to calculate the fold change ($2^{\Delta\Delta$ Ct) shown in the Y-axis.

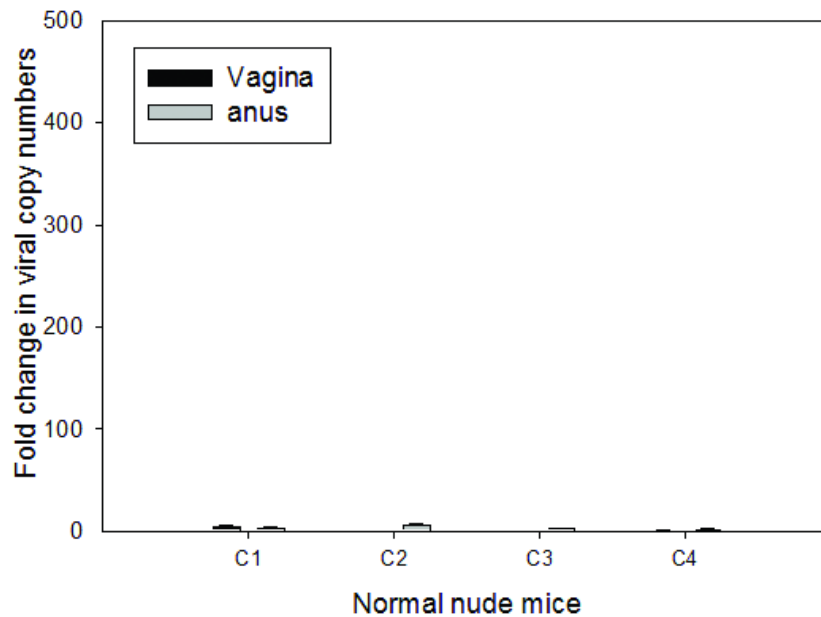


Fig. S2 Relative fold changes in viral copy number vs 18sRNA gene from the anal lavage samples by tracking up to 23 weeks post infection. The anal tracts of five nude mice were wounded with cytobrush and N-9 before MmuPV1 infection. Two mice (1-3L and 1-3R) were tracked for viral infection. 30 μ l of 0.9% NaCl was used to wash the anal canal with a filtered tip three times and SYBR Green Q-PCR was conducted with DNA samples extracted from the anal lavage. The difference in cycle time between viral DNA and 18s RNA gene (Δ Ct) was used to calculate the fold change (2^{Δ Ct}) shown in the Y-axis.

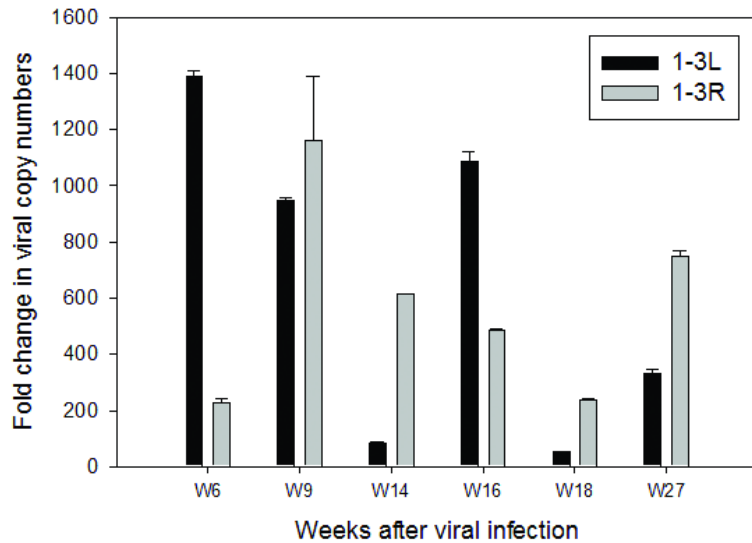


Fig. S3 Relative fold changes in viral copy number vs 18sRNA gene from the oral lavage samples by tracking up to 33 weeks post infection. The tongues of seven nude mice were wounded with microneedles before MmuPV1 infection. Three mice (2-3L, 2-3R and 3-3R) were tracked for viral infection. Mouse wash was collected from the oral cavity with 30 μ l of 0.9% NaCl by pipetting three times with a filtered tip and SYBR Green Q-PCR was conducted with DNA samples extracted from the oral lavage. The difference in cycle time between viral DNA and 18s RNA gene (ΔC_t) was used to calculate the fold change ($2^{\Delta C_t}$) shown in the Y-axis.

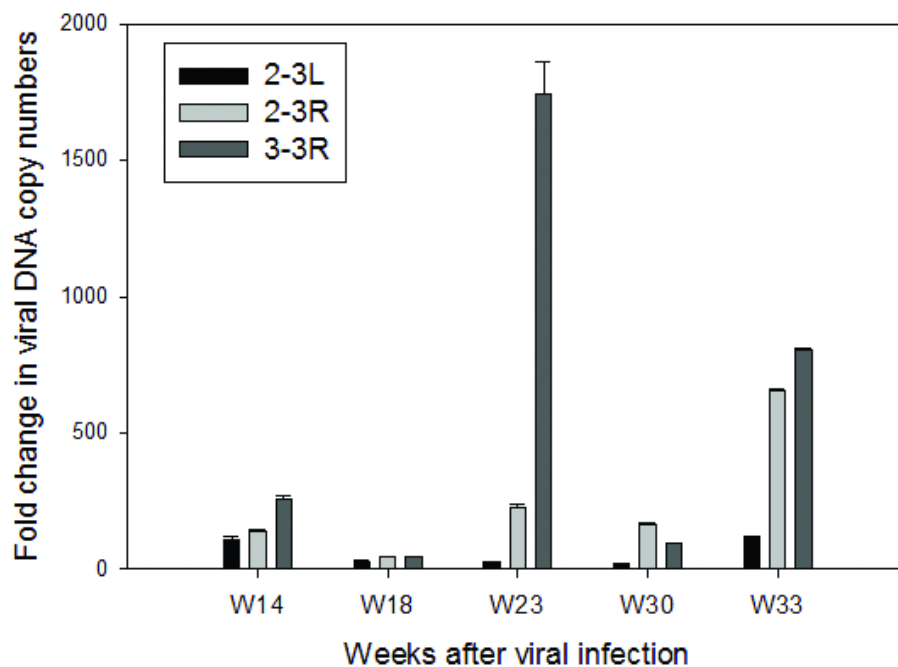


Table S1. Estrous cycle stage determination of MmuPV1 infected mice at week 20 and 27

Mouse	Wounding	Week 20				
		Day 1	Day 2	Day 3	Day 4	Day 5
4-3L	+	D	D	D	P/E	E
4-3R	+	M	P	E	M	P
5-3L	-	E	E	E	E	E
5-3R	-	M	E	M	D	D
		Week 27				
		Day 1	Day 2	Day 3	Day 4	Day 5
4-3L	+	P	M	M/D	M	P
4-3R	+	E	M	M	P/E	P
5-3L	-	M	M	P	E	E
5-3R	-	M	E	P/M	M	M