

## S2 Fig. HSV-1 that express eGFP/cre from the U<sub>L</sub>3/U<sub>L</sub>4 intergenic region are not impaired for growth relative to wildtype virus.

To assess the growth of the recombinant HSV-1 in vitro that contain an eGFP/cre expression cassette, multiple step growth analysis (MOI 0.01) in Vero cells were performed to compare the growth of the parent HSV-1 virus (shown in black) to either (A) HSV-1 pC eGC (shown in blue), (B) HSV-1 pICP47 eGC (shown in red), (C) HSV-1 pICP0 eGC (shown in green), (D) HSV-1 pICP6 eGC (shown in yellow) or (E) HSV-1 pgB\_eGC (shown in purple). Data are mean±SEM of 3 replicates. To assess the growth of these viruses in vivo, groups of 3 or 4 C57BI/6 mice were infected with 1×108 PFU/mL HSV-1 by tattoo. At 5 days p.i., mice were culled and the amount of infectious virus was determined by standard plaque assay from 10 DRG (spinal levels L1 to T5) or 1 cm<sup>2</sup> skin located over the site of infection. Circles show results for each mouse and bars represent mean±SEM. (F) Comparison of amount of virus in C57BI/6 mice infected with HSV-1 KOS (shown in black) or HSV-1 pC eGC (shown in blue). (G) Comparison of amount of virus in C57BI/6 mice infected with HSV-1 KOS (shown in black) or HSV-1 pICP0 eGC (shown in green). The means were compared in each tissue by an unpaired t test, but in all cases the difference was not statistically significant. (H) Comparison of amount of virus in C57BI/6 mice infected with HSV-1 KOS (shown in black), HSV-1 pICP47\_eGC (shown in red), HSV-1 pICP6\_eGC (shown in yellow) or HSV-1 pgB\_eGC (shown in purple). The amount of virus in the skin or DRG was compared to that of HSV-1 KOS using an ANOVA with Dunnett's posttest, but in all cases the differences in means was not statistically significant (p > 0.05).