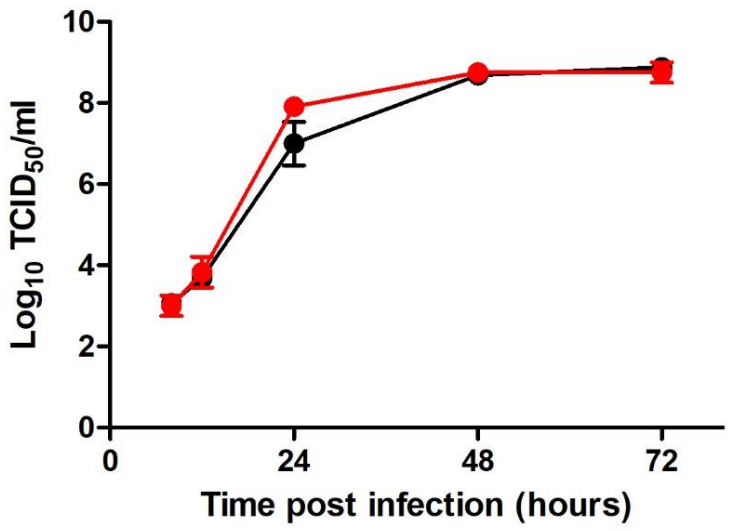
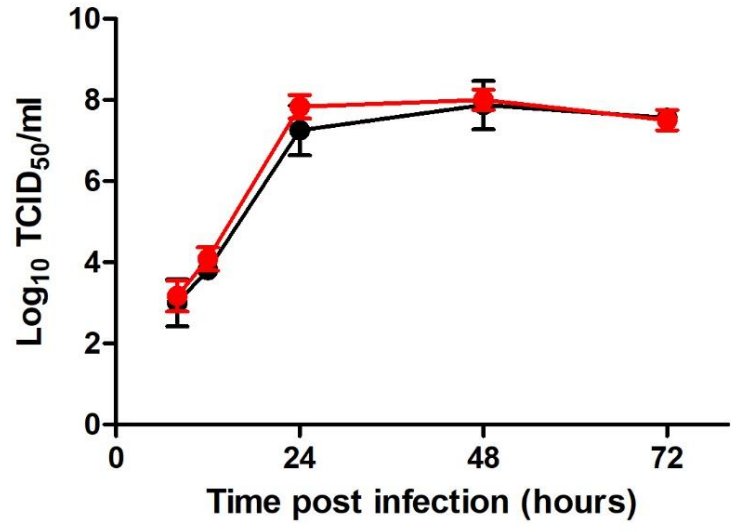
MDCK

MDCK-SIAT1

A



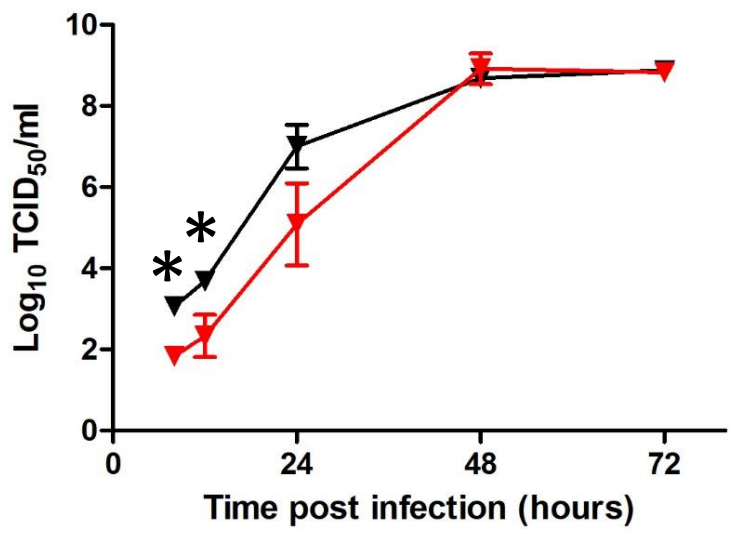
B



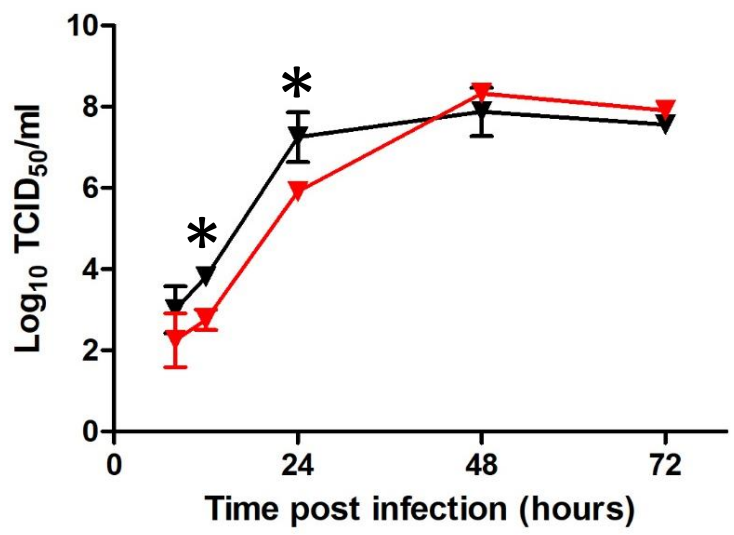
A(H1N1)pdm09-I38

A(H1N1)pdm09-I38L

C



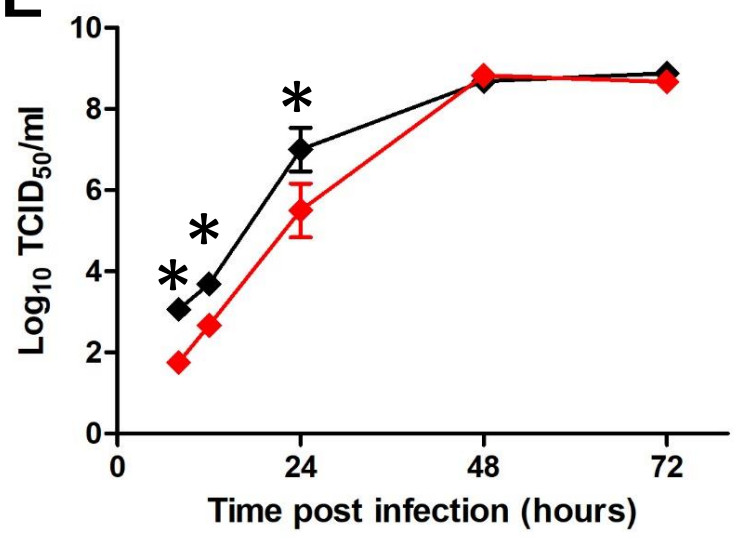
D



A(H1N1)pdm09-I38

A(H1N1)pdm09-I38T

E



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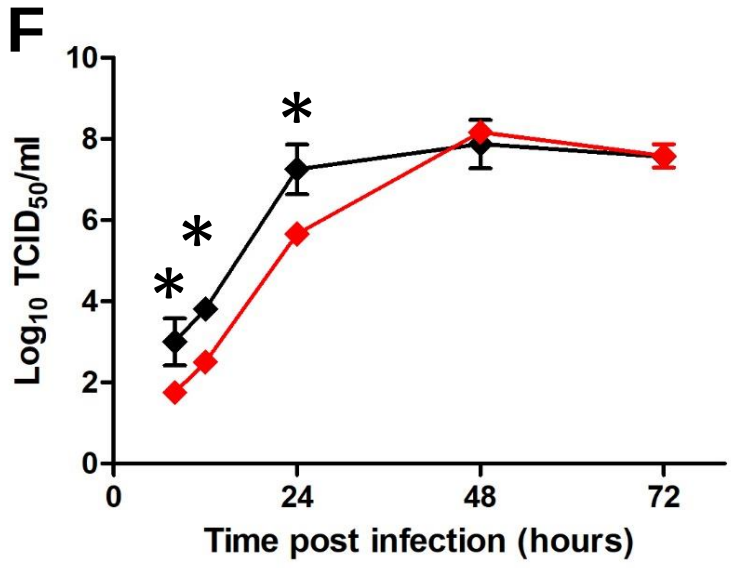
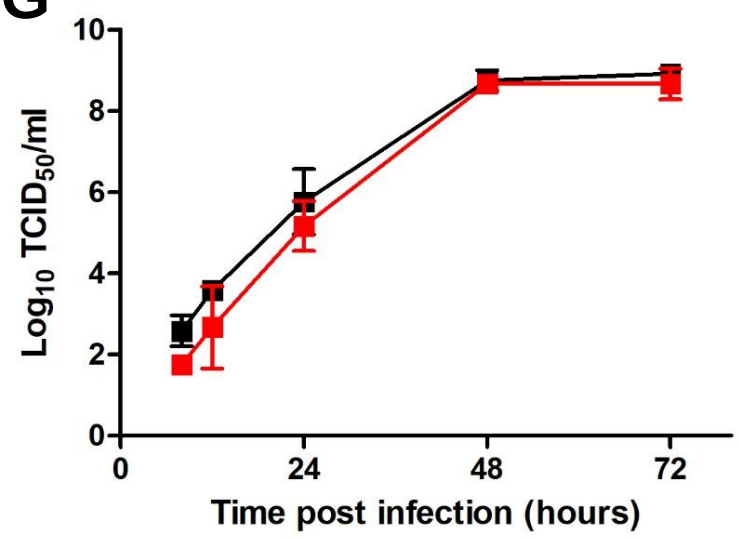


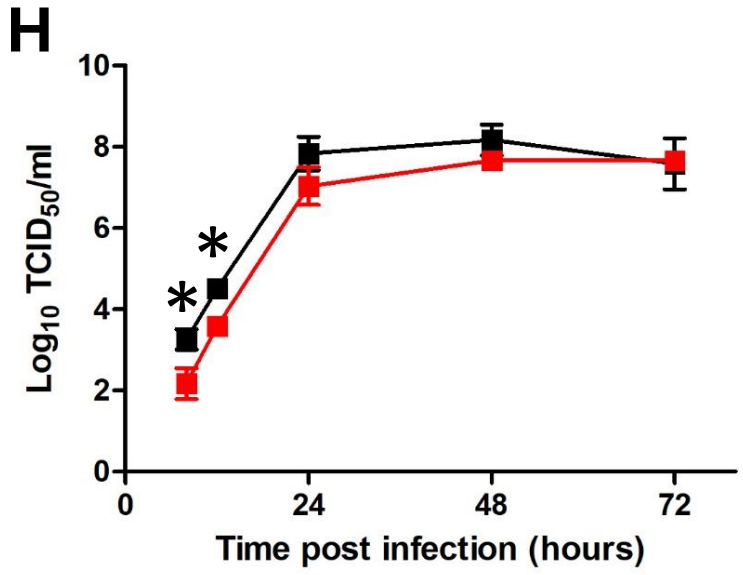
A(H1N1)pdm09-I38

A(H1N1)pdm09-I38S

G



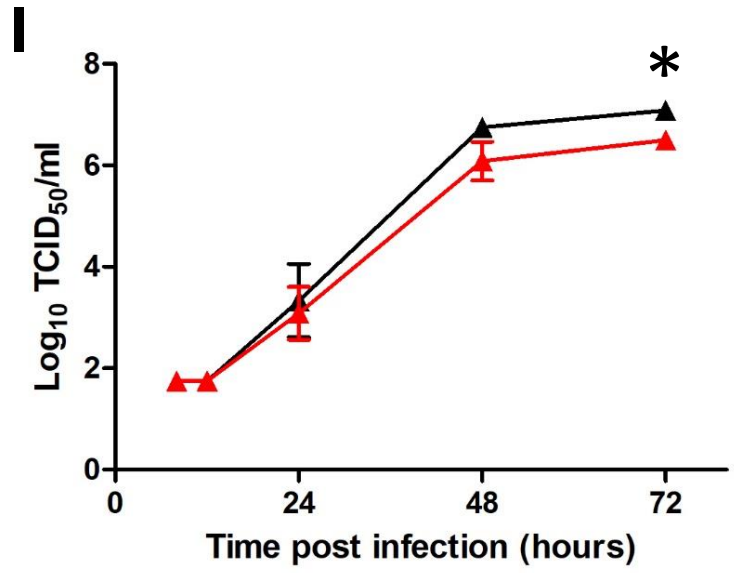
H



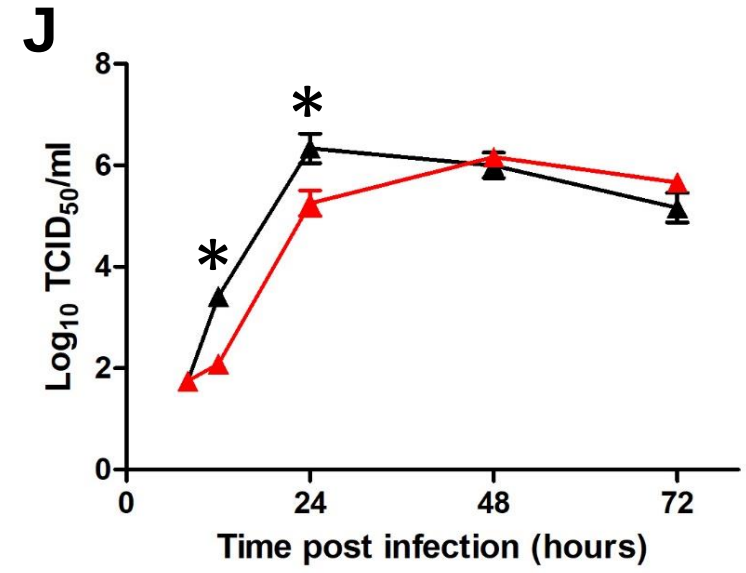
A(H3N2)-I38

A(H3N2)-I38M

I



J



A(H3N2)-I38

A(H3N2)-I38T

Effect of PA substitutions I38L, I38M, I38S, and I38T on growth of type A viruses in MDCK and MDCK-SIAT1 cells. Cell monolayers were infected at a multiplicity of infection (MOI) of 0.0001. Supernatants were collected at 8, 12, 24, 48, and 72 hours post-infection and infectious virus titers were determined and expressed as $\log_{10}$ $TCID_{50}$/mL. The lower limit of virus detection is 1.75$\log_{10}$ $TCID_{50}$/mL. Data shown are mean ± SD. Unpaired *t*-test with Welch's correction was used for statistical comparisons (* $p<0.05$).