



**Fig. S5. IAV facilitates viral infectivity of WT or mutant SARS-CoV-2.**

(a) MDCK cells were preinfected with WSN (MOI=0.1), H1N1 (MOI=1), or H3N2 (MOI=1) for 12 h and were then infected with pseudo-SARS-CoV-2 for another 24 h, followed by measurement of luciferase activity. (b) A549 cells were preinfected with WSN at an MOI of 0.1 for 12 h and were then infected with D614G mutant pseudo-SARS-CoV-2 for another 24 h, followed by measurement of luciferase activity. (c) A549 cells were transfected with the eight individual WSN segments 24 h ahead of live SARS-CoV-2 infection. Total RNA was extracted from cell supernatant to detect the E gene copies via Taqman-qRT-PCR at 48 h.p.i.. The data are expressed as fold changes relative to the vector control. Values represent means  $\pm$  SD of three independent experiments. (d) The ACE2 mRNA levels were detected by qRT-PCR from segment-2-transfected A549 cells. The data

are expressed as the fold changes relative to the vector control. Values represent means  $\pm$  SD of three independent experiments. \* $P$ <0.05, \*\* $P$ <0.01, \*\*\* $P$ <0.001, \*\*\*\* $P$ <0.0001.