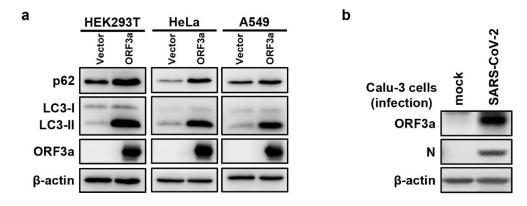
Fig. S1



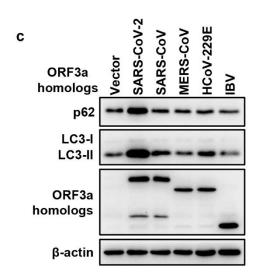


Fig. S1 SARS-CoV-2 ORF3a specifically inhibited autophagy.

- **a**. SARS-CoV-2 ORF3a was expressed in different cell lines, and its effect on autophagy was confirmed by measuring the protein levels of p62 and LC3-II.
- **b**. SARS-CoV-2 ORF3a was expressed during viral infection of human cells. Human Calu-3 cells were infected with SARS-CoV-2 virus obtained by clinical isolation, and 48h after infection the expression of ORF3a and structural N protein was measured.
- **c**. SARS-CoV-2 ORF3a specifically inhibited autophagy. ORF3a homologs from  $\alpha$ -CoV (HCoV-229E),  $\beta$ -CoV (SARS-CoV-2, SARS-CoV, MERS-CoV) and  $\gamma$ -CoV (IBV) were expressed in HeLa cells, and their effect on autophagy was analyzed by measuring the protein levels of p62 and LC3-II.