



**Supplementary information, Fig. S8 The predicted model of interactions between EK1C4 peptide and HR1 domains of SARS-CoV-2.** **a.** The interaction model of HR1 domain of SARS-CoV-2 to EK1 peptide and cholesterol group are predicted by SWISS-MODEL server using 6XLT as reference, and Autodock 4 software, respectively. Structures are shown in cartoon representation, and each region of EK1C4 peptides is colored differently and labeled. **b.** The superposed structure of EK1C4 (Pink) and HR2 (Blue) peptides. **c.** The cholesterol domain is predicted to be buried in the hydrophobic grooves of SARS-CoV-2 HR1 domains. **d.** The EK1C4 peptide are predicted to interact with SARS-CoV-2 HR1 domain through several hydrogen bonds and salt bridges.