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Mesenchymal stem cell-derived extracellular vesicles reduce cellular inflammation responses to respiratory viral proteins

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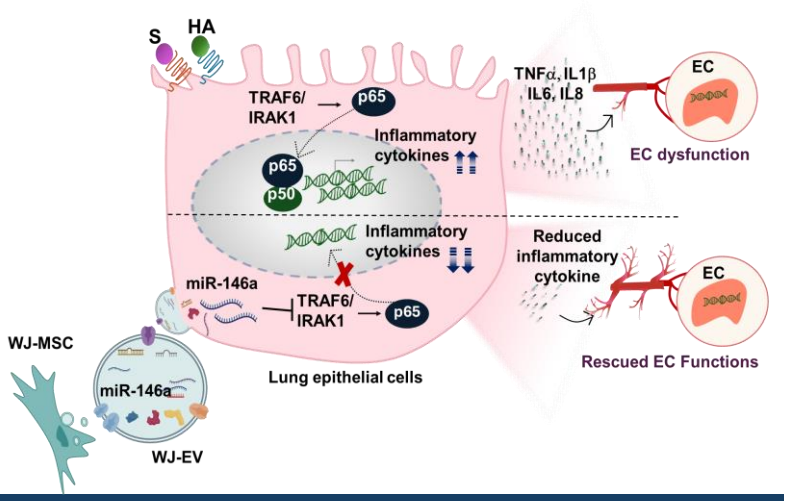
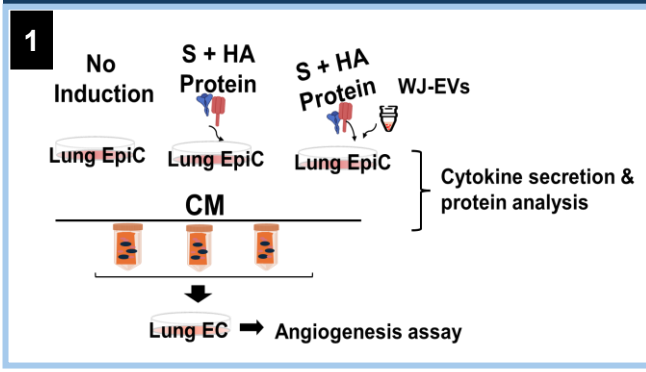
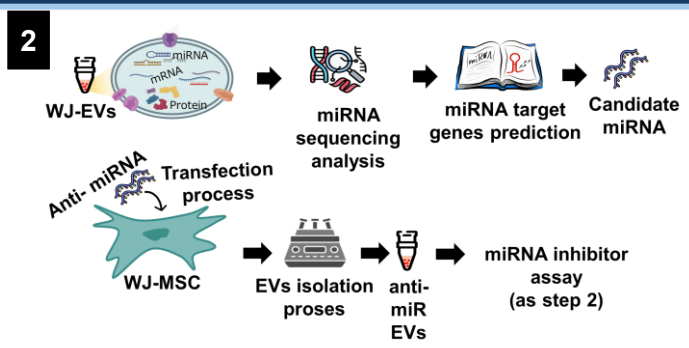
Summary

- SARS-CoV-2 and H1N1 protein co-infection induces excessive lung inflammation and endothelial dysfunction.
- WJ-EV–mediated transfer of miR-146a suppresses TRAF6/IRAK1–NF-κB signaling and restores angiogenic capacity.
- WJ-EVs provide promising insight into the development of a novel strategy to regulate inflammatory cytokine responses induced by co-infection with SARS-CoV-2 and H1N1 influenza viruses.



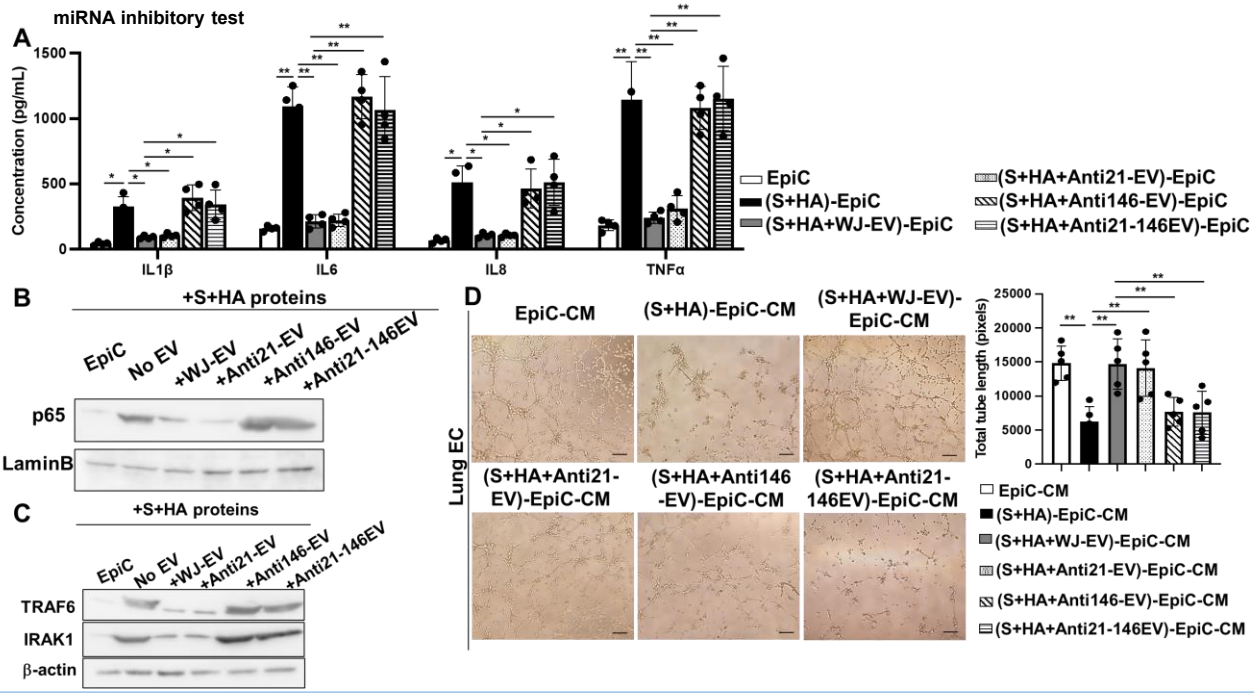
Experimental Design





Result

miR-146a-5p derived from WJ-EVs played a critical role in the inhibition of NF-κB activation in lung EpiC co-induced by SARS-CoV-2 and H1N1 proteins via targeting traf6/irak1



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