viruses

MDPI

Article

Inhibition of the IFN-α JAK/STAT pathway by MERS-CoV and SARS-CoV-1 proteins in human epithelial cells

Yamei Zhang [1], Siobhan Gargan [1], Fiona M. Roche [2], Matthew Frieman [3] and Nigel J. Stevenson [1,4,*]

[1] Viral Immunology Group, School of Biochemistry and Immunology, Trinity Biomedical Sciences Institute, Trinity College Dublin, D02 R590 Dublin, Ireland; yzhang6@tcd.ie (Y.Z.); gargansi@tcd.ie (S.G.)
[2] Smurfit Institute of Genetics, Trinity College Dublin, D02 VF25 Dublin, Ireland; fmroche@tcd.ie
[3] Department of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, MD 21201, USA; mfrieman@som.umaryland.edu
[4] Viral Immunology Group, Royal College of Surgeons in Ireland—Medical University of Bahrain, Adliya 15503, Bahrain
* Correspondence: n.stevenson@tcd.ie

Supplementary Materials:

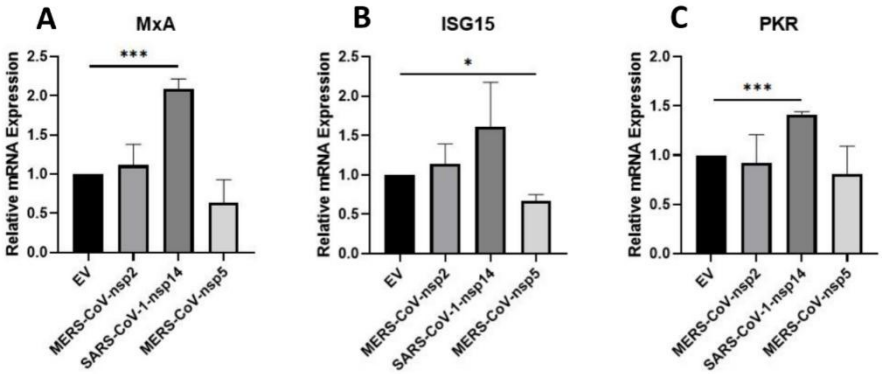


Figure S1. Basal expression of ISGs in EV, MERS-CoV-nsp2, SARS-CoV-1-nsp14 and MERS-CoV-nsp5-transfected A549 cells. A549 cells were transfected with Empty Vector (EV) or HA-tagged MERS-CoV-nsp2, SARS-CoV-1-nsp14 or MERS-CoV-nsp5. After 24 hours, cells were isolated for total RNA before analysing (**A**) MxA (**B**) ISG15 (**C**) PKR mRNAs by qRT-PCR. Gene expression was normalised to house-keeping gene RPS15 and compared to the EV control, which were normalised to 1. All graphs are the mean ± SEM of three independent experiments. **p<0.05*, ****p<0.001 (Student's t test)*

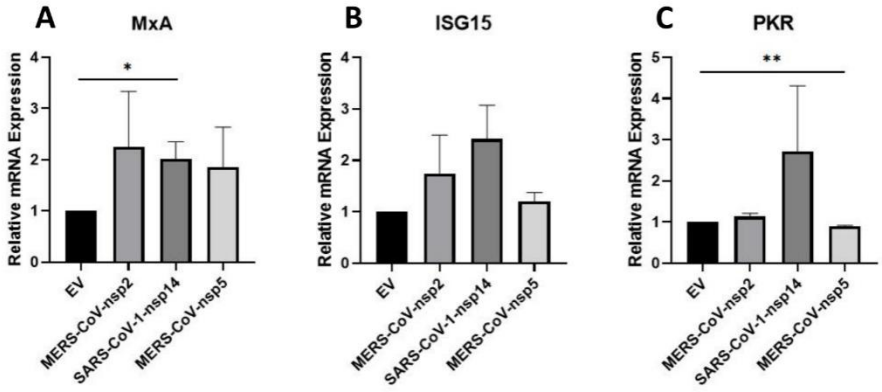


Figure S2. Basal expression of ISGs in EV, MERS-CoV-nsp2, SARS-CoV-1-nsp14 and MERS-CoV-nsp5-transfected BEAS-2B cells. BEAS-2B cells were transfected with Empty Vector (EV) or HA-tagged MERS-CoV-nsp2, SARS-CoV-1-nsp14 or MERS-CoV-nsp5. After 24 hours, cells were isolated for total RNA before analysing (**A**) MxA (**B**) ISG15 (**C**) PKR mRNAs by qRT-PCR. Gene expression was normalised to house-keeping gene RPS15 and compared to the EV control, which were normalised to 1. All graphs are the mean ± SEM of three independent experiments. **p<0.05, **p<0.01 (Student's t test)*