

SUPPLEMENTARY TABLE 1. Potential anti-SARS-CoV-2 restriction factors and their role in impairing the viral replication cycle

| Antiviral Restriction Factor | Abbreviation | Step of SARS-CoV-2 cycle affected | Effect over SARS-CoV-2 replication | References |
|---|--------------|-----------------------------------|---|--|
| Lymphocyte Antigen 6 Family Member E | LY6E | Entry | Reduced entry of the pseudovirus expressing SARSCoV-2 S protein (VSV-S) compared to parental HEK 293T cells (>50%) | Martin-Sancho et al., 2021; Zhao et al., 2020 ; Pfaender et al., 2020. |
| Ubiquitin D | UBD | | | Martin-Sancho et al., 2021 |
| Family With Sequence Similarity 46 Member C | FAM46C | | | |
| C-Type Lectin Domain Family 4 Member D | CLEC4D | | Reduced entry of the pseudovirus expressing SARSCoV-2 S protein (VSV-S) compared to parental HEK 293T cells (>50%) and induced the expression of interferon induced protein with tetratricopeptide repeats 2 (IFIT2) | Martin-Sancho et al., 2021 |
| E74 Like ETS Transcription Factor 1 | ELF1 | | | |
| REC8 Meiotic Recombination Protein | REC8 | | Stymie the endosomal entry of SARS-CoV-2 in Vero E6 cells | BRUCHEZ et al., 2020 |
| p41 isoform of the invariant chain | CD74 p41 | | | |
| Interferon Induced Protein with Tetratricopeptide Repeats 3 | IFIT3 | Translation and RNA replication | Reduced SARS-CoV-2 RNA levels (>50%) in HEK 293T cells | Martin-Sancho et al., 2021 |
| Spermatogenesis Associated Serine Rich 2 Like | SPATS2L | | | |
| DnaJ Heat Shock Protein Family (Hsp40) Member C6 | DNAJC6 | | | |
| Regulator Of G Protein Signaling 2 | RGSS2 | | | |
| Uncharacterized/hypothetical gene | LOC152225 | | | |
| Z-DNA Binding Protein 1 | ZBP1 | | | |
| Beta-1,4-Galactosyltransferase 5 | B4GALT5 | | | |
| Death domain-associated protein 6 | DAXX | | Basal expression of DAXX limited the SARS-CoV-2 replication, and DAXX over-expression further restricted infection. DAXX-mediated restriction of SARS-CoV-2 in A549-ACE2+ cells. This is antagonized by SARS-CoV-2 Papain-Like Protein. | Mac Kain et al., 2022 |

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|--|---------|---------------------|---|--|
| Zinc finger antiviral protein | ZAP | | Overexpression of ZAP-L in HEK 293T, already overexpressing ACE2, reduced viral RNA yields in a dose-dependent manner. Gene depletion leads to increased SARS-CoV-2 RNA levels in Calu-3 cells. | Nchioua et al., 2020; Lee et al., 2021 |
| Poly(ADP-Ribose) Polymerase Family Member 12 | PARP12 | | Gene depletion leads to increased SARS-CoV-2 RNA levels in Calu-3 cells. | Lee et al., 2021 |
| Tripartite Motif Containing 25 | TRIM25 | | | |
| CUGBP Elav-Like Family Member 1 | CELF1 | | | |
| Shiftless Antiviral Inhibitor Of Ribosomal Frameshifting | SHFL | | | |
| 2'-5'-oligoadenilato sintetase 1 | OAS1 | | Inducible CRISPR activation of OAS1 expression by resulted in a significant decrease in the production of SARS-CoV-2 progeny 2 in A549-ACE2+ cells. | Danziger et al., 2022 |
| ER Lipid Raft Associated 1 | ERLIN1 | Assembly | Strongly attenuated late stages of SARS-CoV-2 replication in HEK 293T cells. | Martin-Sancho et al., 2021 |
| Reticulophagy Regulator 1 | RETREG1 | | Restricted SARS-CoV-2 replication in HEK 293T cells. | |
| Fibronectin Type III Domain Containing 4 | FNDC4 | | | |
| Bone Marrow Stromal Cell Antigen 2 | BST2 | Budding and release | Identified as an inhibitor of SARS-CoV-2 replication (>53%) and a potent inhibitor of viral release (>74%) in HEK 293T cells. This is antagonized by SARS-CoV-2 Orf7. | Martin-Sancho et al., 2021 |