

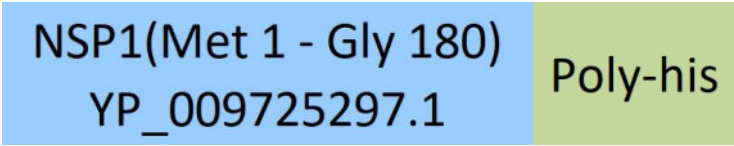
Synonym

NSP1,nsp1,Leader protein,Host translation inhibitor nsp1,COVID-19

Source

SARS-CoV-2 NSP1, His Tag (NS1-C51H7) is expressed from E.coli cells. It contains AA Met 1 - Gly 180 (Accession # [YP_009725297.1](#)).
Predicted N-terminus: Met

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.
The protein has a calculated MW of 21.7 kDa. The protein migrates as 22-25 kDa under reducing (R) condition (SDS-PAGE).

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, Arginine, pH7.4. Normally trehalose is added as protectant before lyophilization.
Contact us for customized product form or formulation.

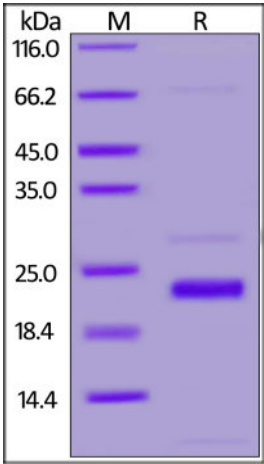
Reconstitution

Please see Certificate of Analysis for specific instructions.
For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:
• -20°C to -70°C for 12 months in lyophilized state;
• -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



SARS-CoV-2 NSP1, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Background

The viral nonstructural protein 1 (nsP1) is the only membrane-associated protein that anchors the replication complex to the cellular membranes. NSP1 inhibits host translation by interacting with the 40S ribosomal subunit. The nsp1-40S ribosome complex further induces an endonucleolytic cleavage near the 5'UTR of host mRNAs, targeting them for degradation. Viral mRNAs are not susceptible to nsp1-mediated endonucleolytic RNA cleavage thanks to the presence of a 5'-end leader sequence and are therefore protected from degradation. By suppressing host gene expression, nsp1 facilitates efficient viral gene expression in infected cells and evasion from host immune response.

References

(1) [Dong S, et al. J Med Virol. 2020.](#)
(2) [Gottipati K, et al. Virology. 2020. 544:31-41.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.