

## SARS-CoV-2 Methyltransferase/ME Protein (His)

### General Information

Protein Construction:	A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) Methyltransferase / ME (YP_009724389.1) (Ser6799-Asn7096) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	SARS-CoV-2
Expression Host:	E. coli
Accession:	YP_009724389.1
Molecular Weight:	33.46 kDa (predicted)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE.
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile 10 mM Tris 250 mM NaCl, 50% Glycerol pH 7.4.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

Coronavirus encodes the 2'-O-MTase (2'O Methyltransferase) that is composed of the catalytic subunit nsp16 and the stimulatory subunit nsp10 and plays an important role in virus genome replication and evasion from innate immunity during viral infection. Nonstructural protein 16 (NSP16) / viral 2'O-methyltransferase (2'O-MTase) is highly conserved. The conserved 2'O-MTase activity is important for CoV pathogenesis and NSP16 is a conserved universal target for rapid live attenuated vaccine design in an expanding Coronavirus outbreak setting, such as COVID-19. Targeting the 2'O-methylation pathway on SARS-CoV replication and pathogenesis can be the treatment options for vaccine and anti-viral drug development which can against SARS-CoV-2, SARS-CoV, MERS-CoV or other RNA and DNA viruses.

Reference

Wang Y,et al., Coronavirus nsp10/nsp16 Methyltransferase Can Be Targeted by nsp10-Derived Peptide In Vitro and In Vivo To Reduce Replication and Pathogenesis.J Virol. 2015

Yu Chen,et al., Biochemical and Structural Insights into the Mechanisms of SARS Coronavirus RNA Ribose 2'-O-Methylation by nsp16/nsp10 Protein Complex.PLOS Pathogens.2011

Mickaël Bouvet,et al.,Coronavirus Nsp10: a Critical Co-Factor for Activation of Multiple Replicative Enzymes.JBC. 2014

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