

Recombinant SARS-CoV-2 NSP10/NSP16 Methyltransferase, Active

Cat. No. HUM-359 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

SARS-CoV-2 NSP10/NSP16 methyltransferase is a full-length active recombinant protein expressed in *E. coli* using a C-terminal His tag. SARS-CoV-2, previously known as the 2019 Novel Coronavirus (2019-nCoV), causes the pandemic COVID-19 disease.

Tag

His

Background

In December 2019 a novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), formerly known as the 2019 novel coronavirus (2019-nCoV) was identified in Wuhan, China, causing a world-wide pandemic (Wu et al., 2020). Three coronaviruses, SARS-CoV, MERS-CoV, and SARS-CoV-2 have been identified as being highly pathogenic for humans, and there is currently no effective antiviral treatment. Therefore, studies are focused on rapid development of vaccines and antiviral drugs to prevent and treat coronavirus infection. There are several potential strategies to pharmacologically fight against the disease (COVID-19), including vaccines, monoclonal antibodies, oligonucleotide-based therapies, peptides, interferon therapies, and small-molecule drugs (Dömling & Gao, 2020).

Many eukaryotic viruses have evolved 2'-O-methyltransferases (2'-O-MTase) to modify their viral mRNAs and carry a cap-1 structure (m⁷GpppNm) at the 5' end. This 5' cap structure is important for viral mRNA stability, protein translation and viral immune escape (Furuichi et al., 2000). SARS-CoV possess NSP16 that has 2'-O-MTase activity. NSP16 requires NSP 10 for activation which is a conserved mechanism in corona viruses (Decroly et al., 2008). Mutations have been

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identified in SARS-CoV-2 NSP10 and NSP16, which alter NSP10-NSP-16 secondary structure, and protein-modelling studies have revealed that such mutations can affect the proteins dynamicity and stability (Azad et al., 2020). Therefore, inhibitors targeting the NSP10/NSP16 2'-O-MTase are potential targets for developing anti-coronavirus drugs (Chen et al., 2011).

Purity >90% purity.

Formulation 50mM sodium phosphate, pH 7.0, 300mM NaCl, 150mM imidazole, 0.25mM DTT, 25% glycerol.

Notes This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Type Recombinant

ClassID 1 Infectious Disease

GENE INFORMATION

Synonyms SARS-CoV-2 NSP10/NSP16 Methyltransferase

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