BioVendor - Laboratorní medicína a.s.
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BioVendor
Research
and Diagnostic Products

PRODUCT DATASHEET

SARS-CoV-2 Nucleocapsid Recombinant Protein

Product Data Sheet / Certificate of Analysis

Cat. No.:	**RP9720130050**	**RP9720130250**	**RP9720131000**
	0.05 mg	**0.25 mg**	**1 mg**

Introduction:
Coronaviruses (CoVs), within the order Nidovirales, are enveloped, single-strand, positive-sense RNA viruses with a large genome of approximately 30 kbp in length. A human infecting coronavirus (viral pneumonia) initially known as 2019 novel coronavirus (2019-nCoV) was found in the fish market at the city of Wuhan, Hubei province of China in December 2019. The virus is now named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

SARS-CoV-2 shares an 87% identity to the 2 bat-derived severe acute respiratory syndrome 2018 SARS-CoV-2 located in Zhoushan of eastern China. SARS-CoV-2 has an analogous receptor-BD-structure to that of 2018 SARS-CoV, even though there is a.a. diversity so thus the SARS-CoV-2 might bind to ACE2 receptor protein (angiotensin-converting enzyme 2) in humans.

While bats are possibly the host of SARS-CoV-2, researchers suspect that animal from the ocean sold at the seafood market was an intermediate host. RSCU analysis proposes that the SARS-CoV-2 is a recombinant within the viral spike glycoprotein between the bat coronavirus and an unknown coronavirus.

Coronaviruses contain at least four structural proteins: Spike (S) protein, envelope (E) protein, membrane (M) protein, and nucleocapsid (N) protein.

The primary function of the nucleocapsid (N) protein is to package the viral RNA genome within the viral envelope into a ribonucleoprotein (RNP) complex called the capsid. Ribonucleocapsid packaging is a fundamental part of viral self-assembly and replication. Additionally, the N-protein of the SARS-CoV-2 affects host cell responses and may serve regulatory roles during its viral life cycle.

Description:

The E.Coli derived recombinant protein contains the SARS-CoV-2 full-length nucleoprotein: Gene bank- MN908947, fused to His tag at C-terminal and having a Mw. Of 48 kDa as appears on SDS-PAGE

Amino Acid Sequence
MSDNGPQNQRNAPRITFGGPSDSTGSNQNGERSGARSKQRRPQGLPNNTASWFTALTQHGKED
LKFPRGQGVPINTNSSPDDQIGYYRRATRRIRGGDGKMKDLSPRWYFYYLGTGPEAGLPYGAN
KDGIIWVATEGALNTPKDHIGTRNPANNAAIVLQLPQGTTLPKGFYAEGSRGGSQASSRSSSR
SRNSSRNSTPGSSRGTSPARMAGNGGDAALALLLLDRLNQLESKMSGKGQQQQGQTVTKKSAA
EASKKPRQKRTATKAYNVTQAFGRRGPEQTQGNFGDQELIRQGTDYKHWPQIAQFAPSASAFF
GMSRIGMEVTPSGTWLTYTGAIKLDDKDPNFKDQVILLNKHIDAYKTFPPTEPKKDKKKKADE
TQALPQRQKKQQTVTLLPAADLDDFSKQLQQSMSSADSTQA

Source:
Escherichia Coli

Physical Appearance:
Sterile Filtered clear solution.

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Formulation:
SARS-CoV-2 Nucleocapsid Protein is supplied in PBS and 10mM K2CO3.

Purity:
Greater than 95.0% as determined by SDS-PAGE.

Stability/Storage:
Shipped on ice packs. Store at -20°C upon arrival.

Usage:
BioVendor's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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