SARS-CoV-2 (2019-nCoV) Nucleocapsid-AVI & His recombinant Protein, Biotinylated

Catalog Number: 40588-V27B-B

General Information

Gene Name Synonym:

coronavirus NP; coronavirus Nucleocapsid; coronavirus Nucleoprotein; cov np; ncov NP; NCP-CoV Nucleocapsid; novel coronavirus NP; novel coronavirus Nucleocapsid; novel coronavirus Nucleoprotein; np; nucleocapsid; Nucleoprotein

Protein Construction:

A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) Nucleocapsid Protein (YP_009724397.2(335Gly/Ala)) (Met1-Ala419) was expressed with a c-terminal polyhistidine tagged AVI tag at the C-terminus. The purified protein was biotinylated in vitro.

Source: 2019-nCoV

Expression Host: Baculovirus-Insect Cells

QC Testing

Biotin/Protein Ratio:

0.7-1 as determined by the HABA assay.

Purity: > 85 % as determined by SDS-PAGE.

Endotoxin:

< 1.0 EU per μg protein as determined by the LAL method.

Predicted N terminal: Met1

Molecular Mass:

The recombinant SARS-CoV-2 (2019-nCoV) Nucleocapsid Protein consists of 430 amino acids and predicts a molecular mass of 47.08 kDa.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH8.0, 10% glycerol

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:

Protein Description

Coronaviruses are enveloped viruses with a positive-sense RNA genome and with a nucleocapsid of helical symmetry. Coronavirus nucleoproteins localize to the cytoplasm and the nucleolus, a subnuclear structure, in both virus-infected primary cells and in cells transfected with plasmids that express N protein. Coronavirus N protein is required for coronavirus RNA synthesis, and has RNA chaperone activity that may be involved in template switch. Nucleocapsid protein is a most abundant protein of coronavirus. During virion assembly, N protein binds to viral RNA and leads to formation of the helical nucleocapsid. Nucleocapsid protein is a highly immunogenic phosphoprotein also implicated in viral genome replication and in modulating cell signaling pathways. Because of the conservation of N protein sequence and its strong immunogenicity, the N protein of coronavirus is chosen as a diagnostic tool.

References

1.1.Van Boheemen S, et al. (2012), MBio. 3(6):e00473-12.
2.Bisht H. et al., 2004, Proc Natl Acad Sci. 101 (17): 6641-6.
3.Li W. et al., 2005, Science. 309 (5742): 1864-8.