

## SARS-CoV-2 (2019-nCoV) Nucleocapsid Protein (His tag)

Catalog Number: 40588-V08B



### 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 polyhistidine tag at the C-terminus.

**Source:** 2019-nCoV

**Expression Host:** Baculovirus-Insect Cells

### QC Testing

**Purity:** > 90 % as determined by SDS-PAGE.

#### Endotoxin:

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

**Predicted N terminal:** Met

#### Molecular Mass:

The recombinant SARS-CoV-2 (2019-nCoV) Nucleocapsid Protein (His tag) 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°C to -80°C.

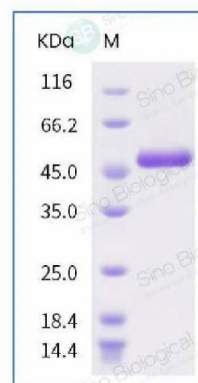
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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.

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Tel: [REDACTED]

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Website: <http://www.sinobiological.com>