

Human coronavirus (HCoV-OC43) Nucleocapsid Protein (His Tag)

Catalog Number: 40643-V07E



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General Information

Gene Name Synonym:

NP-CoV

Protein Construction:

A DNA sequence encoding the Human coronavirus (HCoV-OC43) Nucleocapsid (YP_009555245.1) (Met1-Ile448) was expressed with a polyhistidine tag at the N-terminus.

Source: HCoV-OC43

Expression Host: E. coli

QC Testing

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

Endotoxin:

Please contact us for more information.

Predicted N terminal: Met

Molecular Mass:

The recombinant heterodimer of Human coronavirus (HCoV-OC43) Nucleocapsid consists of 455 amino acids and has a calculated molecular mass of 50.43 KDa.

Formulation:

Lyophilized from sterile 40mM PB, 500mM NaCl, pH 7.4

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. 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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