

## SARS-CoV-2 Nucleocapsid Protein, Human (His)

Cat. No.:	HY-P72034
Synonyms:	Nucleocapsid protein
Species:	Human
Source:	E. coli
Accession:	P0DTC9 (M1-A419)
Gene ID:	43740575
Molecular Weight:	Approximately 48-50 kDa

### PROPERTIES

AA Sequence	<p>MSDNGPQNQR    NAPRITFGGP    SDSTGSNQNG    ERSGARSKQR</p> <p>RPQGLPNNTA    SWFTALTQHG    KEDLKFPRGQ    GVPINTNSSP</p> <p>DDQIGYYRRA    TRRIRGGDGK    MKDLSRWYF    YYLGTGPEAG</p> <p>LPYGANKDGI    IWVATEGALN    TPKDHIGTRN    PANNAAILVLQ</p> <p>LPQGTTL PKG    FYAEGSRGGS    QASSRSSRS    RNSSRNSTPG</p> <p>SSRGTSPARM    AGNGGDAALA    LLLLDRLNQL    ESKMSGKGQQ</p> <p>QQGQTVTKKS    AAEASKKPRQ    KRTATKAYNV    TQAFGRRGPE</p> <p>QTQGNFGDQE    LIRQGTDYKH    WPQIAQFAPS    ASAFFGMSRI</p> <p>GMEVTPSGTW    LTYTAAIKLD    DKDPNFKDQV    ILLNKHIDAY</p> <p>KTFPPTPEKK    DKKKKADETQ    ALPQRQKKQQ    TVTLLPAADL</p> <p>DDFSKQLQQS    MSSADSTQA</p>
Biological Activity	<p>1. Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-N at 2 µg/mL can bind SARS-CoV-2-N Antibody and the EC<sub>50</sub> is 0.9081 -8.795 ng/mL.</p> <p>2. Immobilized SARS-CoV-2 Nucleocapsid protein, His Tag at 1 µg/mL (100 µL/well) can bind Anti-SARS-CoV-2 Nucleocapsid Antibody. The ED<sub>50</sub> for this effect is 5.118 ng/mL.</p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0 or 50 mM Tris-HCl, 300 mM NaCl, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

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## DESCRIPTION

### Background

The SARS-CoV-2 Nucleocapsid Protein assumes a pivotal role in virion assembly, orchestrating the packaging of the positive-strand viral genome RNA into a helical ribonucleocapsid (RNP) and establishing crucial interactions with the viral genome and membrane protein M. Beyond its structural functions, this protein significantly contributes to the efficiency of subgenomic viral RNA transcription and overall viral replication. Notably, it exhibits an additional role in modulating host chemokine function, a mechanism that may favor viral replication and transmission. The Nucleocapsid Protein achieves this modulation by being secreted into the extracellular space, where it competes with host chemokines for binding to host glycosaminoglycans (GAG), thus potentially disrupting host defense mechanisms and supporting the viral life cycle.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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