



## PRODUCT DATASHEET

<b>Catalog No:</b>	CK-6404-b
<b>Pack Size</b>	1mg
<b>Product Name:</b>	SARS-CoV-2 Nucleocapsid Protein, recombinant
<b>Description:</b>	Full-length nucleocapsid protein of SARS-CoV-2 (COVID-19) expressed in E. coli. Contains 6x His tag located at the C terminal.
<b>Species:</b>	2019-nCoV, SARS-CoV-2
<b>Sequence:</b>	Full-length nucleocapsid protein of SARS-CoV-2 (COVID-19) expressed in E. coli. Contains 6x His tag located at the C terminal.
<b>Accession No.:</b>	<a href="#">YP_009724397</a>
<b>Tag:</b>	His-tag
<b>Host:</b>	E. Coli
<b>Applications:</b>	Potentially suitable for ELISA or lateral flow type assay.
<b>Purity:</b>	95% as determined by SDS-PAGE
<b>Predicted Molecular Mass:</b>	Predicts a molecular mass at 48 kDa.

<b>Formulation:</b>	Frozen liquid in PBS and 25mM K <sub>2</sub> CO <sub>3</sub> with preservatives.
<b>Endotoxin:</b>	Endotoxin level is < 0.1 ng/μg of protein (<1.0 EU/μg purified protein) (LAL test)
<b>Shipping, Storage and Stability:</b>	≤-70 °C. Avoid repeated freeze-thaw.
<b>Background:</b>	<p>Coronaviruses have a positive-sense RNA genome 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 Nucleocapsid (N) protein.</p> <p>The N protein is a structural protein that binds to the coronavirus RNA genome, thus creating a shell (or capsid) around the enclosed nucleic acid. Besides</p> <ol style="list-style-type: none"> <li>1. interacts with the viral membrane protein during viral assembly</li> <li>2. assists in RNA synthesis and folding</li> <li>3. plays a role in virus budding</li> <li>4. affects host cell responses, including cell cycle and translation.</li> </ol> <p>Coronavirus N protein is required for coronavirus RNA synthesis and has RNA chaperone activity that may be involved in template switch. N protein is the most abundant protein of coronavirus. During virion assembly, N protein binds to viral RNA and leads to formation of the helical nucleocapsid. It is a highly immunogenic phosphoprotein, also implicated in viral genome replication, and in modulating cell signaling pathways. It is chosen as a diagnostic tool, due to the conservation of N protein sequence and its strong immunogenicity.</p>

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