



**DATA SHEET**

<p><b>Protein Name</b></p> <p>Nucleocapsid [N] Protein</p>	<p><b>Protein ID:</b> SARS-CoV2 Nucleocapsid [N] Protein.      <b>Catalog#</b> 103</p> <p><b>Fusion tag:</b> Poly-Histidine-tag at C-Terminus</p>
<p><b>Accession#</b> QHD43423.2</p> <p><b>Source:</b> Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).</p> <p>A synthetic construct encoding the SARS-CoV-2 Nucleocapsid [N] Protein (Methionine 1-Alanine 419) was expressed with a C-terminus poly-histidine tag.</p> <p><b>Expression Host:</b> E. coli</p> <p><b>Molecular Weight:</b> 47 kDa</p> <p><b>Supplied in buffer:</b> 25 mM Phosphate buffer [pH 8.0] + 150 mM NaCl and 0.1% Sodium Sarkosyl.</p>	<p><b>Description:</b> The size of SARS-CoV-2 genome is about 30kb that encodes four structural proteins include spike (S) protein, envelope (E) protein, membrane (M) protein, and nucleocapsid (N) protein (1). Among these structural proteins, the primary functions of N protein are binding to the viral RNA genome and packing them into a long helical nucleocapsid structure or ribonucleoprotein (RNP) complex (2).</p> <p>As N protein is a highly immunogenic and abundantly expressed protein during infection (3), it is frequently used in vaccine development and serological assays. Thus, N protein is an important antigen for SARS-CoV2 which participate in RNA package and virus particle release.</p> <p>1.Zhao et al. Genomic characterization and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. Lancet (London, England) 2020;395:565–574.</p> <p>2. Shang et al. Characterization and application of monoclonal antibodies against N protein of SARS-coronavirus. Biochem. Biophys. Res. Commun. 2005; 336:110–117.</p> <p>3. Functional exhaustion of antiviral lymphocytes in COVID-19 patients. Cell. Mol. Immunol. 2020 doi: 10.1038/s41423-020-0402-2.</p>

Coomassie-blue stained SDS-PAGE under reducing conditions.

