

## 12-8457: Anti-SARS-CoV-2 Nucleocapsid (N) (Clone NP1-C5) Purified No Carrier Protein

<b>Clonality :</b>	Monoclonal
<b>Clone Name :</b>	NP1-C5
<b>Application :</b>	ELISA
<b>Alternative Name :</b>	COV2-NP1-C5, SARS-CoV-2 Nucleocapsid, SARS-CoV-2 Nucleoprotein, Protein N, SARS-CoV N Protein
<b>Isotype :</b>	Human IgG1

### Description

Specificity: Anti-SARS-CoV-2 Nucleocapsid, clone NP1-C5, specifically targets an epitope on the SARS-CoV-2 nucleocapsid protein. Furthermore, it is reported to bind to the RNA binding domain of the N protein.

Antigen Distribution: The nucleocapsid protein is expressed in the internal nucleocapsid of SARS-CoV-2.

Background: Coronavirus disease 2019 (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). SARS-CoV-2 belongs to the Coronaviridae family, and its single-stranded, positive-sense RNA genome shares 79.6% identity with SARS-CoV1. The spike (S), envelope (E), membrane (M), and nucleocapsid proteins (N) are four essential structural proteins of SARS-CoV-2. The 46 kDa N protein is highly conserved and shares 90% homology with SARS-CoV3. Similar to SARS-CoV, SARS-CoV-2 has an N-terminal (NTD) and C-terminal domain (CTD), linked by a linker region. The NTD binds to RNA, while the CTD self-oligomerizes<sup>4,5</sup>, aiding viral genome packaging into a helical ribonucleoprotein complex<sup>6</sup>. The N protein also participates in viral transcription, replication, and modulation of cell signaling pathways<sup>7,8</sup>. Some vaccine and diagnostic assays<sup>9</sup> have focused on the N protein as it is highly expressed during infection and activates antibodies<sup>3,10</sup> and memory T cells<sup>11,12</sup>, found in convalescent sera. The N-protein also evades the innate immune system by inhibiting RNAi<sup>13</sup>, identifying it as a potential therapeutic target.

### Product Info

<b>Amount :</b>	100 µg / 500 µg
<b>Purification :</b>	Purity :>=90% monomer by analytical SEC and SDS-Page Preparation : Recombinant antibodies are manufactured in an animal free facility using only in vitro protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates. Concentration:>=1.0 mg/ml
<b>Content :</b>	Formulation: This recombinant monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.
<b>Storage condition :</b>	This antibody may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at <= -70°C. Avoid Repeated Freeze Thaw Cycles.