

## 12-8466: Anti-SARS-CoV-2 Nucleocapsid (N) (Clone NP1-D4) Purified No Carrier Protein

<b>Clonality :</b>	Monoclonal
<b>Clone Name :</b>	NP1-D4
<b>Application :</b>	ELISA
<b>Alternative Name :</b>	COV2-NP1-D4, 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-D4, 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 the Coronaviridae family virus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)<sup>1</sup>. SARS-CoV-2 has four structural proteins encoded by its single-stranded, positive-sense RNA genome: the spike (S), envelope (E), membrane (M), and nucleocapsid (N) proteins<sup>2</sup>. The N protein is a highly conserved 46 kDa protein that shares 90% homology with SARS-CoV<sup>3</sup>. The N protein has an N-terminal (NTD) and C-terminal domain (CTD), which bind to RNA and self-oligomerize, respectively<sup>4,5</sup>, forming a helical nucleocapsid structure within the viral envelope<sup>6</sup>. Other functions of the N protein included viral transcription, replication, and modulating cell signaling pathways<sup>7,8</sup>. The N protein is abundantly expressed during infection, and antibodies<sup>3,9</sup> and memory T cells<sup>10,11</sup> targeting the N protein have been identified in convalescent sera. Therefore, the N protein is a target in some vaccines and diagnostic assays<sup>12</sup>. The N protein also has therapeutic potential, as it evades RNAi-mediated antiviral responses<sup>13</sup>.

### 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.