

12-8459: Anti-SARS-CoV-2 Nucleocapsid (N) (Clone NP1-C5) HRP

Clonality :	Monoclonal
Clone Name :	NP1-C5
Application :	ELISA
Alternative Name :	COV2-NP1-C5, SARS-CoV-2 Nucleocapsid, SARS-CoV-2 Nucleoprotein, Protein N, SARS-CoV N Protein
Isotype :	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^{4,5}, aiding viral genome packaging into a helical ribonucleoprotein complex⁶. The N protein also participates in viral transcription, replication, and modulation of cell signaling pathways^{7,8}. Some vaccine and diagnostic assays⁹ have focused on the N protein as it is highly expressed during infection and activates antibodies^{3,10} and memory T cells^{11,12}, found in convalescent sera. The N-protein also evades the innate immune system by inhibiting RNAi¹³, identifying it as a potential therapeutic target.

Product Info

Amount :	50 µg Concentration:0.5 mg/ml
Content :	Formulation: This HRP-conjugated antibody is formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4, 1% BSA. (Warning: Use of sodium azide as a preservative will inhibit the enzyme activity of horseradish peroxidase)
Storage condition :	This horseradish peroxidase conjugated monoclonal antibody is stable when stored at 2-8°C. Do not freeze.