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12-8444: Anti-SARS-CoV-2 Nucleocapsid (N) (Clone NP1-F9) -HRP

Clonality :	Monoclonal
Clone Name :	NP1-F9
Application :	ELISA
Alternative Name :	COV2-NP1-F9, 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-F9, specifically targets an epitope on the SARS-CoV-2 nucleocapsid protein.
Antigen Distribution: The nucleocapsid protein is expressed in the internal nucleocapsid of SARS-CoV-2.
Background: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of coronavirus disease 2019 (COVID-19), is an enveloped, single-stranded, positive-sense RNA virus that belongs to the Coronaviridae family 1. The SARS-CoV-2 genome, which shares 79.6% identity with SARS-CoV, encodes four essential structural proteins: the spike (S), envelope (E), membrane (M), and nucleocapsid protein (N) 2. The N protein is 46 kDa and consists of two highly conserved structural domains, the N-terminal domain (NTD) and C-terminal domain (CTD), connected by a linker region. The NTD and CTD are involved in RNA binding and self-oligomerization, respectively 3, 4. The primary function of the N protein is to bind to and package the viral RNA genome into a helical ribonucleoprotein complex 5. The N protein is also involved in other critical steps of the viral life cycle, including transcription, replication, and modulating infected cell signaling pathways 6, 7. The N protein is abundantly expressed during infection and is highly conserved, sharing 90% amino acid homology with the SARS-CoV N protein 8. It is also immunogenic, and antibodies 8,9 and memory T cells 10, 11 targeting the N protein are present in the sera of convalescent COVID-19 patients, identifying the N protein as a suitable candidate for vaccine development and diagnostic assays. Diagnostic assays based on the N protein effectively detect antibodies in the sera of patients infected with SARS-CoV-2 12. The N protein also contributes to immune evasion by antagonizing antiviral RNAi 13, suggesting its potential value as a targeted therapeutic.

Product Info

Amount :	50 µg
Content :	Concentration:0.5 mg/ml 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.

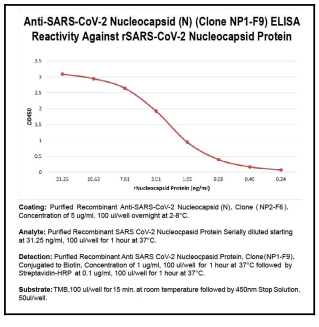


Figure 1

For Research Use Only. Not for use in diagnostic/therapeutics procedures.