

**Datasheet for 600-406-MS4****SARS-CoV-2 Nucleocapsid (N) Protein Antibody Biotin Conjugated****Overview**

|                      |                                                                                            |
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| <b>Description:</b>  | Anti-SARS-CoV-2 Nucleocapsid (N) Protein (RABBIT) Antibody Biotin Conjugated - 600-406-MS4 |
| <b>Item No.:</b>     | 600-406-MS4                                                                                |
| <b>Size:</b>         | 100 µg                                                                                     |
| <b>Applications:</b> | ELISA                                                                                      |
| <b>Reactivity:</b>   | SARS-CoV-2                                                                                 |
| <b>Host Species:</b> | Rabbit                                                                                     |

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Background:</b>   | SARS-CoV-2 (Severe acute respiratory syndrome coronavirus 2) the virus that causes the disease COVID-19, is related to SARS-CoV, MERS-CoV, and other betacoronaviruses (HKU1, NL63, OC43 and 229E). SARS-CoV-2 is an enveloped positive strand RNA virus that consists of several structural proteins including spike (S) protein, envelope (E) protein, membrane (M) protein and nucleocapsid (N) protein; and other non-structural proteins (NSPs). The coronavirus nucleocapsid protein is the major structural component of virions that associates with genomic RNA to form a long, flexible, helical nucleocapsid. Sequence comparison of the N genes of five strains of the coronavirus mouse hepatitis virus suggests a three-domain structure for the nucleocapsid protein. Anti-SARS-CoV Nucleocapsid (N) Protein Antibody is useful for researchers interested in diagnostics, and viral research. |
| <b>Synonyms:</b>     | rabbit anti-SARS CoV 2 Nucleocapsid Protein Antibody, N-protein antibody, SARS CoV2 antibody, 2019-nCoV, COVID-19, Severe acute respiratory syndrome antibody, Severe acute respiratory syndrome coronavirus 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Host Species:</b> | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Conjugate:</b>    | Biotin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Clonality:</b>    | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Format:</b>       | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Target Details**

|                    |            |
|--------------------|------------|
| <b>Reactivity:</b> | SARS-CoV-2 |
|--------------------|------------|

|                            |                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>Immunogen Type:</b>     | Recombinant Protein                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Immunogen:</b>          | Anti-SARS-CoV-2 Nucleocapsid (N) Protein Biotin Conjugated Antibody was produced by repeated immunizations with purified recombinant SARS-CoV-2 Nucleocapsid protein with C-terminal His-tag, derived from the transfected human HEK293 cells.                                                                                                                                         |
| <b>Purity/Specificity:</b> | This affinity purified conjugated antibody is directed against SARS Coronavirus 2 Nucleocapsid (N) protein. The product was purified from monospecific antiserum by immunoaffinity chromatography over SARS CoV-2 resin. BLAST analysis was used to suggest reactivity with related Coronavirus proteins. Cross reactivity with homologues from other sources has not been determined. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"> <li>• <a href="#">NCBI - QHD43423</a></li> <li>• <a href="#">NCBI - MN908947.3</a></li> <li>• <a href="#">GeneID - 43740575</a></li> <li>• <a href="#">UniProtKB - P0DTC9</a></li> </ul>                                                                                                                                                            |

## Application Details

|                             |                                                                                                                                                                                                                                                                                                                                                 |
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| <b>Tested Applications:</b> | ELISA                                                                                                                                                                                                                                                                                                                                           |
| <b>Application Note:</b>    | Anti-SARS-CoV-2 Nucleocapsid (N) Protein Antibody conjugated to biotin has been tested for use in ELISA. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 47 kDa in size corresponding to SARS-CoV-2 Nucleocapsid (N) protein by western blotting in the appropriate cell lysate or extract. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                                                                                 |
| <b>ELISA:</b>               | 1:350,000-1:450,000                                                                                                                                                                                                                                                                                                                             |
| <b>WB:</b>                  | User Optimized                                                                                                                                                                                                                                                                                                                                  |

## Formulation

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <b>Physical State:</b>        | Lyophilized                                                            |
| <b>Concentration:</b>         | 1mg/ml by UV absorbance at 280 nm                                      |
| <b>Buffer:</b>                | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2             |
| <b>Preservative:</b>          | 0.01% (w/v) Sodium Azide                                               |
| <b>Stabilizer:</b>            | 10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free |
| <b>Reconstitution Volume:</b> | 100 µL                                                                 |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent)                           |

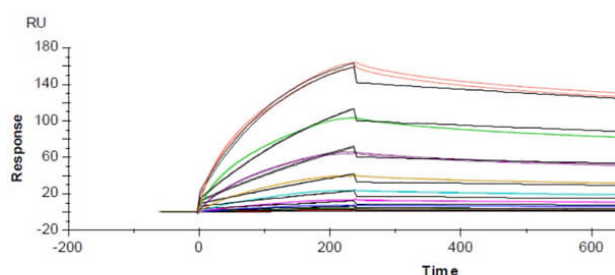
## Shipping & Handling

**Shipping Condition:** Ambient

**Storage Condition:** Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

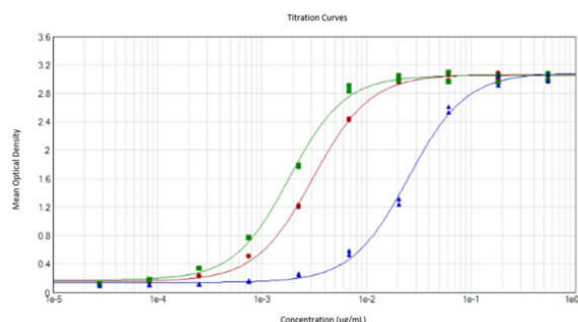
**Expiration:** Expiration date is one (1) year from date of receipt.

## Images



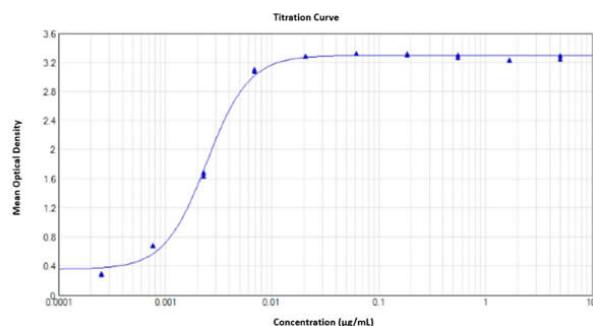
### Surface Plasmon Resonance (SPR)

Surface Plasmon Resonance (SPR) Data of Rabbit Anti-SARS-CoV-2 Nucleocapsid (N) Antibody. SARS-CoV-2 Nucleocapsid protein was immobilized on a carboxymethyl dextran sensor chip. Ten (10) dilutions of Anti-SARS-CoV-2 Nucleocapsid (N) Antibody (colors) were flowed across the chip at 30  $\mu\text{L}/\text{min}$  with 240 s contact time and then 720 s dissociation time. Fitted line (black) constants are:  $k_{on} = 2.2 \times 10^4 \text{ M}^{-1} \text{ s}^{-1}$  and  $k_{off} = 3.3 \times 10^{-4} \text{ s}^{-1}$ . The Equilibrium Dissociation constant (KD) of the antibody on several assays was 15 nM. (Average primary antibody KD = 1  $\mu\text{M}$ ).



### ELISA

ELISA results of Rabbit Anti-SARS CoV-2 Nucleocapsid (N) Protein. Each well was coated in duplicate with 0.5  $\mu\text{g}$  of SARS CoV-1 (N) Protein [Red Line], SARS CoV-2 (N) Protein [Green Line], MERS N [Blue Line]. The starting dilution of antibody was 0.5  $\mu\text{g}/\text{mL}$  and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. SARS CoV-1 N IC50: 3ng/mL, SARS CoV-2 N IC50: 2ng/mL, MERS N IC50: 25mg/mL. Assay performed using Goat Anti-Rabbit IgG HRP conjugated (p/n 611-1302) and TMB substrate (p/n TMBE-1000).



## ELISA

ELISA Results of Rabbit Anti-SARS CoV-2 Nucleocapsid (N) Protein Antibody Biotin Conjugated. Each well was coated in duplicate with 10µg/mL of SARS CoV-2 N Protein [Blue Line]. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using Streptavidin-Peroxidase (p/n S000-03) at 1:10,000, 3% Fish Gel/PBS (p/n MB-066), HRP Conjugate Stabilizer (p/n MB-076) and TMB substrate (p/n TMBE-1000).

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.