

# PRODUCT INFORMATION



## SARS-CoV-2 Nucleocapsid Protein

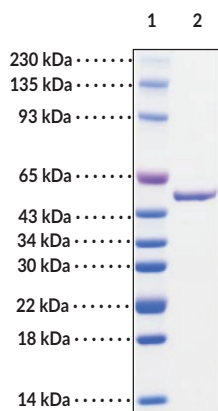
Item No. 30427

### Overview and Properties

**Synonyms:** COVID-19 Nucleocapsid Protein, Severe Acute Respiratory Syndrome Coronavirus 2 Nucleocapsid Protein  
**Amino Acids:** 1-419 (full length)  
**Molecular Weight:** 49.7 kDa  
**Storage:** -80°C (as supplied)  
**Stability:** ≥1 year  
**Purity:** ≥90% estimated by SDS-PAGE  
**Supplied in:** 50 mM Tris-HCl, pH 7.4, with 150 mM sodium chloride and 0.1 M glycine

*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Image



Lane 1: MW Markers

Lane 2: SARS-CoV-2 Nucleocapsid Protein

SDS-PAGE analysis using Coomassie Brilliant Blue

*Representative gel image shown; actual purity may vary between each batch.*

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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**CAYMAN CHEMICAL**

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM

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## Description

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Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) nucleocapsid protein is a viral protein encoded by the *N* gene in SARS-CoV-2 RNA.<sup>1</sup> SARS-CoV-2 is a member of the *Betacoronavirus* genus of viruses and has 88% sequence identity with two bat-derived SARS-like CoVs.<sup>2</sup> The SARS-CoV-2 genome contains approximately 30 kilobases that encode four structural proteins: spike, envelope, membrane, and nucleocapsid.<sup>1,3</sup> In a similar virus, SARS-CoV, the nucleocapsid protein packages the viral RNA into a helical ribonucleoprotein complex (RNP) that is a template for viral replication.<sup>4</sup> The SARS-CoV nucleocapsid protein is integral for viral self-assembly and is involved with regulation of the cell cycle. The SARS-CoV-2 nucleocapsid protein gene sequence is greater than 90% similar to the SARS-CoV nucleocapsid protein, and it contains 27 T cell epitopes that are identical to SARS-CoV T cell epitopes.<sup>3</sup> SARS-CoV-2 is the causative agent of COVID-19, a primarily respiratory illness characterized by fever, cough, and shortness of breath that can lead to life-threatening complications.<sup>5-7</sup> Cayman's SARS-CoV-2 Nucleocapsid Protein can be used as an antigen or for Western blot, ELISA, protein-protein interaction studies, and other *in vitro* binding and *in vivo* functional assays.

## References

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