

# Product Data Sheet



## Recombinant SARS-CoV Nucleocapsid Protein

Product Code: 39505

Sengenics Corporation Pte Ltd

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[www.sengenics.com](http://www.sengenics.com)

### Description:

Recombinant SARS-CoV Nucleocapsid protein lysates, full length. Protein is expressed in baculovirus expression system in insect cells using the patented KREX™ functional proteomics technology.

### Expression System:

Insect cell

### GenBank Accession:

NP\_828858.1

### Synonym:

SARS-CoV, SARS Coronavirus, N protein, NC

### Protein Length:

422aa

### Expected Molecular Weight:

46.04kDa calculated from the sequence below  
([https://www.bioinformatics.org/sms/prot\\_mw.html](https://www.bioinformatics.org/sms/prot_mw.html))

### Form:

Liquid (Crude lysates)

### Lysis Buffer:

25mM HEPES, 50mM KCl, 4mM CaCl<sub>2</sub>, 20mM MgCl<sub>2</sub>, 20% Glycerol, 0.2% Triton X-100, 0.2% BSA, 2mM DTT, 1 tablet Protease inhibitor (in 5mL buffer)

### Storage Conditions:

-80° C, Avoid Freeze/Thaw Cycles

### Stability:

Lysates are stable for up to 18 months from production date

### Shipping:

Frozen shipment in dry ice

### Authorised Uses:

For Research Use Only\*

### Applications:

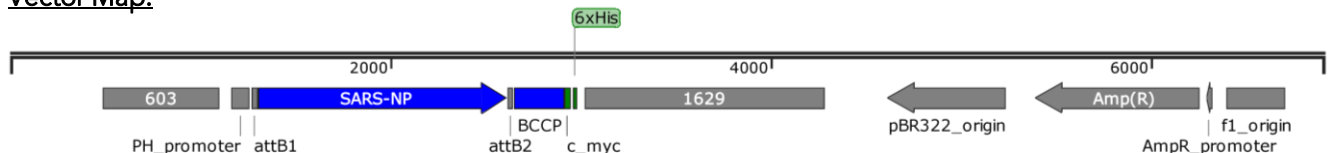
Identification, development or production of a high-affinity vaccine; Development of an antigen-based COVID-19 sero-diagnostic test; Characterisation of full-length, correctly folded and functional SARS-CoV antigen.

### Sequence:

>SARS-CoV-NP

```
1 MSDNGPQSNQ RSAPRITFGG PTDSTDNNQN GGRNGARPKQ RRPQGLPNNT ASWFTALTQH
61 GKEELRFPRG QGVPINTNSG PDDQIGYYRR ATRRVVGGDG KMKELSPRWY FYYLGTGPEA
121 SLPYGANKEG IVWVATEGAL NTPKDHIGTR NPNNNAATVL QLPQGTTLPK GFYAEGSRGG
181 SQASSRSSSR SRGNSRNSTP GSSRGNSPAR MASGGGETAL ALLLLDRLNQ LESKVSQKGG
241 QQQGQTVTKK SAAEASKKPR QKRTATKQYN VTQAFGRRGP EQTQGNFGDQ DLIRQGTQDYK
301 HWPQIAQFAP SASAFFGMSR IGMEVTPSGT WLTYHGAIKL DDKDPQFKDN VILLNKHIDA
361 YKTFPPTEPK KDKKKKTDEA QPLPQRQKKQ PTVTLLPAAD MDDFSRQLQN SMSGASADST
421 QA
```

### Vector Map:



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### Sequence alignment with reference sequence (NP\_828858.1):

```
SARS-CoV-NP      MSDNGPQSNQRSAPRITFGGPTDSTDNNQNGGRNGARPKQRRPQGLPNNTASWFTALTQH 60
NP_828858.1      MSDNGPQSNQRSAPRITFGGPTDSTDNNQNGGRNGARPKQRRPQGLPNNTASWFTALTQH 60
*****

SARS-CoV-NP      GKEELRFRPQGQVPIINTNSGDDQIGYYRRATRRVRGGDGKMKELSPRWYFYLLGTGPEA 120
NP_828858.1      GKEELRFRPQGQVPIINTNSGDDQIGYYRRATRRVRGGDGKMKELSPRWYFYLLGTGPEA 120
*****

SARS-CoV-NP      SLPYGANKEGIVVWVATEGALNTPKDHIGTRNPNNNAATVLLQLPQGTTLPKGFYAEGRGG 180
NP_828858.1      SLPYGANKEGIVVWVATEGALNTPKDHIGTRNPNNNAATVLLQLPQGTTLPKGFYAEGRGG 180
*****

SARS-CoV-NP      SQASSRSSRSRGNRSRNPSTPGSSRGNSPARMASGGGETALALLLLDRLNQLLESKVSQKQ 240
NP_828858.1      SQASSRSSRSRGNRSRNPSTPGSSRGNSPARMASGGGETALALLLLDRLNQLLESKVSQKQ 240
*****

SARS-CoV-NP      QQQGQTVTKKSAAEASKKPRQKRTATKQYNVTQAFGRRGPEQTQGNFGDQDLIRQGTDYK 300
NP_828858.1      QQQGQTVTKKSAAEASKKPRQKRTATKQYNVTQAFGRRGPEQTQGNFGDQDLIRQGTDYK 300
*****

SARS-CoV-NP      HWPQIAQFAPSASAFFGMSRIGMEVTPSGTWLTYHGAIKLDDKDPQFKDNVILLNKHIDA 360
NP_828858.1      HWPQIAQFAPSASAFFGMSRIGMEVTPSGTWLTYHGAIKLDDKDPQFKDNVILLNKHIDA 360
*****

SARS-CoV-NP      YKTFPPTPEPKDKKKKTDEAQPLPQRQKQPTVTLTPAADMDDFSRQLQNSMSGASADST 420
NP_828858.1      YKTFPPTPEPKDKKKKTDEAQPLPQRQKQPTVTLTPAADMDDFSRQLQNSMSGASADST 420
*****

SARS-CoV-NP      QA                422
NP_828858.1      QA                422
**
```

### References:

1. Sengenics KREX™ proteomics technology [<https://www.sengenics.com/krex/>]
2. KREX™ is protected by multiple international patents worldwide [<https://www.sengenics.com/list-of-patents/>]
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4. Beeton-Kempen, Natasha et al. 2014. "Development of a Novel, Quantitative Protein Microarray Platform for the Multiplexed Serological Analysis of Autoantibodies to Cancer-Testis Antigens." *International journal of cancer* 135(8): 1842–51
5. Other References [<https://www.sengenics.com/sengenics-krex-publications/>]
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8. Huang, Q., Yu, L., Petros, A.M., Gunasekera, A., Liu, Z., Xu, N., Hajduk, P., Mack, J., Fesik, S.W. & Olejniczak, E.T. 2004. "Structure of the N-terminal RNA-binding domain of the SARS CoV nucleocapsid protein." *Biochemistry.* 43(20):6059-63.

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