Product Data Sheet

Recombinant MERS-CoV Nucleocapsid Protein
Product Code: 39506

Sengenics Corporation Pte Ltd
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Description:
Recombinant MERS-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:
AKQ21082.1

Synonym:
MERS-CoV, MERS Coronavirus, N protein, NC

Protein Length:
413aa

Expected Molecular Weight:
45.06kDa calculated from the sequence below (https://www.bioinformatics.org/sms/prot_mw.html)

Form:
Liquid (Crude lysates)

Lysis Buffer:
25mM HEPES, 50mM KCl, 4mM CaCl2, 20mM MgCl2, 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 MERS-CoV antigen.

Sequence:
>MERS-CoV-NP

```
  1 MASPAAPRAV SFADNNDITN TNLSRGRGRN PKPRAAPNNT VSWYTGLTQH GKVPLTFPPG
 61 QGVPLNANST PAQNAGYWRR QDRKINTGNG IKQLAPRWYF YYTGTGPEAA LPFRAVKDGI
121 VWVHEDGATD APSTFGTRNP NNDSAIVTQF APGTKLPKNF HIEGTGGNSQ SSSRASSVSR
181 NSSRSSSQGS RSGNSTRGTS PGPSGIGAVG GDLLYLDLLN RLQALESGKV KQSQPKVITK
241 KDAAAAKNKM RHKRTSTKSF NMVQAFGLRG PGDLQGNFGD LQLNKLGTED PRWPQIAELA
301 PTASAFMGMS QFKLTHQNND DHGNPVYFLR YSGAIKLDPK NPNYNKWLEL LEQNIDAYKT
361 FPKKEKKQKA PKEESTDQMS EPPKEQRVQG SITQRTRTRP SVQPGPMIDV NTD
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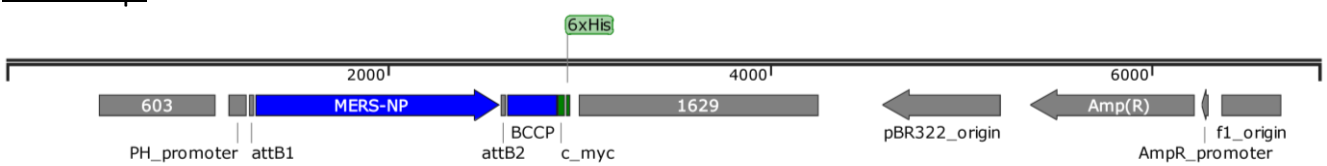
Vector Map:



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Sequence alignment with reference sequence (AKQ21082.1):

```
MERS-CoV-NP       MASPAAPRAVSFADNNDITNTNLSRGRGRNPKPRAAPNNTVSWYTGLTQHGKVPLTFPPG 60
AKQ21082.1        MASPAAPRAVSFADNNDITNTNLSRGRGRNPKPRAAPNNTVSWYTGLTQHGKVPLTFPPG 60
                  ************************************************************

MERS-CoV-NP       QGVPLNANSTPAQNAGYWRRQDRKINTGNGIKQLAPRWYFYYTGTGPEAALPFRAVKDGI 120
AKQ21082.1        QGVPLNANSTPAQNAGYWRRQDRKINTGNGIKQLAPRWYFYYTGTGPEAALPFRAVKDGI 120
                  ************************************************************

MERS-CoV-NP       VWVHEDGATDAPSTFGTRNPNNDSAIVTQFAPGTKLPKNFHIEGTGGNSQSSSRASSLSR 180
AKQ21082.1        VWVHEDGATDAPSTFGTRNPNNDSAIVTQFAPGTKLPKNFHIEGTGGNSQSSSRASSVSR 180
                  ************************************************************:**

MERS-CoV-NP       NSSRSSSQGSRSGNSTRGTSPGPSGIGAVGGDLLYLDLLNRLQALESGKVKQSQPKVITK 240
AKQ21082.1        NSSRSSSQGSRSGNSTRGTSPGPSGIGAVGGDLLYLDLLNRLQALESGKVKQSQPKVITK 240
                  ************************************************************

MERS-CoV-NP       KDAAAAKNKMRHKRTSTKSFNMVQAFGLRGPGDLQGNFGDLQLNKLGTEDPRWPQIAELA 300
AKQ21082.1        KDAAAAKNKMRHKRTSTKSFNMVQAFGLRGPGDLQGNFGDLQLNKLGTEDPRWPQIAELA 300
                  ************************************************************

MERS-CoV-NP       PTASAFMGMSQFKLTHQNNDDHGNPVYFLRYSGAIKLDPKNPNYNKWLELLEQNIDAYKT 360
AKQ21082.1        PTASAFMGMSQFKLTHQNNDDHGNPVYFLRYSGAIKLDPKNPNYNKWLELLEQNIDAYKT 360
                  ************************************************************

MERS-CoV-NP       FPKKEKKQKAPKEESTDQMSEPPKEQRVQGSITQRTRTRPSVQPGPMIDVNTD        413
AKQ21082.1        FPKKEKKQKAPKEESTDQMSEPPKEQRVQGSITQRTRTRPSVQPGPMIDVNTD        413
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References:

1. Sengeics KREX™ proteomics technology [**https://www.sengenics.com/krex/**]
2. KREX™ is protected by multiple international patents worldwide [**https://www.sengenics.com/list-of-patents/]**
3. Blackburn, Jonathan M, and Aubrey Shoko. 2011. "Protein Function Microarrays for Customised Systems-Oriented Proteome Analysis." Methods in molecular biology (Clifton, N.J.) 785: 305–30
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/**]