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Produktinformation

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siehe unsere Liefer- und Versandbedingungen

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- Mindermengenzuschlag
- Trockeneiszuschlag
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PRODUCT INFORMATION

MERS-CoV Nucleocapsid Protein (recombinant)

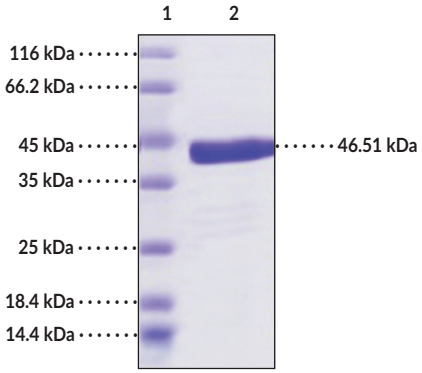
Item No. 40878

Overview and Properties

Synonyms:	MERS-CoV Nucleoprotein, MERS-CoV N Protein
Source:	Recombinant MERS-CoV C-terminal His-tagged nucleocapsid expressed in insect cells
Amino Acids:	1-413 (full length)
Peptide Sequence:	
Uniprot No.:	K0BVN3
Molecular Weight:	46.51 kD
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥90% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 20 mM Tris, pH 8.0, with 500 mM sodium chloride and 10% glycerol
Endotoxin Testing:	<1.0 EU/µg, determined by the LAL endotoxin assay
Bioactivity:	See figure for details

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

Image



Lane 1: MW Markers
Lane 2: MERS-CoV Nucleocapsid Protein

SDS-PAGE Analysis of MERS-CoV Nucleocapsid Protein. This protein has a calculated molecular weight of 46.51 kDa.

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PRODUCT INFORMATION

Description

Middle East respiratory syndrome coronavirus (MERS-CoV) is an enveloped positive-stranded RNA virus, a member of the *Betacoronavirus* genus, and a causative agent of MERS, an acute respiratory disease that often leads to pneumonia and renal failure.[1,2] The MERS-CoV nucleocapsid protein is composed of an intrinsically disordered region (IDR), an N-terminal domain that binds RNA, a flexible linker containing serine and arginine phosphorylation sites, a C-terminal domain that also participates in RNA binding and is responsible for dimerization, and another IDR.[3,4] Coronavirus nucleocapsid proteins, including the MERS-CoV nucleocapsid protein, package the viral genome into a ribonucleoprotein (RNP) complex.[4] In addition, the MERS-CoV nucleocapsid protein interacts with the ubiquitin ligase TRIM25 and inhibits the activation of retinoic acid-inducible gene I (RIG-I) and phosphorylation of IFN regulatory factor 3 (IRF3) and NF-κB.[5] It reduces IFN-β and IFN-λ1 promoter activity induced by the RIG-I caspase activation and recruitment domain (RIG-I-CARD), but not MDA5-CARD, and reduces Sendai virus-induced increases in IFN-β and IFN-λ1 mRNA levels. Cayman's MERS-CoV Nucleocapsid Protein (recombinant) consists of 424 amino acids and has a calculated molecular weight of 46.51 kDa.

References

1. Du, L., Yang, Y., Zhou, Y., *et al*. MERS-CoV spike protein: A key target for antivirals. *Expert Opin. Ther. Targets* **21(2)**, 131-143 (2017).
2. Rabaan, A.A., Al-Ahmed, S.H., Haque, S., *et al*. SARS-CoV-2, SARS-CoV, and MERS-COV: A comparative overview. *Infez. Med*. **28(2)**, 174-184 (2020).
3. Papageorgiou, N., Lichière, J., Baklouti, A., *et al*. Structural characterization of the N-terminal part of the MERS-CoV nucleocapsid by X-ray diffraction and small-angle X-ray scattering. *Acta Crystallogr. D. Struct. Biol*. **72(Pt 2)**, 192-202 (2016).
4. Zhang, B., Tian, J., Zhang, Q., *et al*. Comparing the nucleocapsid proteins of human coronaviruses: Structure, immunoregulation, vaccine, and targeted drug. *Front. Mol. Biosci*. **9**, 761173 (2022).
5. Chang, C.-Y., Liu, H.M., Chang, M.-F., *et al*. Middle East respiratory syndrome coronavirus nucleocapsid protein suppresses type I and type III interferon induction by targeting RIG-I signaling. *J. Virol*. **94(13)**, e00099-20 (2020).

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