Recombinant MERS-CoV Nucleocapsid His-tag

Catalog Number: 10521-CV

DESCRIPTION

Source	*Spodoptera frugiperda*, *Sf* 21 (baculovirus)-derived mers-cov Nucleocapsid protein Met1-Thr411, with a C-terminal 6-His tag Accession # YP_007188586.1
N-terminal Sequence Analysis	Sequence has been confirmed by mass spectrometry
Predicted Molecular Mass	46 kDa

SPECIFICATIONS

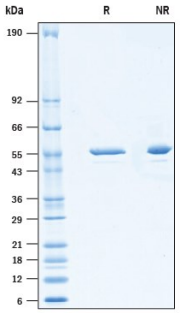
SDS-PAGE	49-55 kDa, under reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

SDS-PAGE



2 µg/lane of Recombinant MERS-CoV Nucleocapsid His-tag Protein (Catalog # 10521-CV) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 49-55 kDa.

BACKGROUND

MERS-CoV, which causes the Middles East Respiratory Syndrome (MERS), belongs to a family of viruses known as coronaviruses that are commonly comprised of four structural proteins: Spike protein (S), Envelope protein (E), Membrane protein (M), and Nucleocapsid protein (N) (1). While the S, E and M proteins build up the viral envelope, the N protein is involved transcription, replication and packaging of the viral RNA genome into a helical ribonucleocapsid (RNP) (1, 2). The MERS-CoV N protein is a ~45 kDa protein composed of two independent structural domains connected by a linker region. The N-terminal region contains an Intrinsically Disordered Region (3) and an RNA binding domain (4), the linker region interacts with the M protein and the C-terminal region contains a self-association domain (1, 2). The MERS-CoV N protein shares 46.3% and 4.5% amino acid sequence identity with SARS-CoV-1 and SARS-CoV-2 N protein, respectively. MERS-CoV N proteins have been shown to inhibit Type I Interferon(IFN) production(1). In addition, the N protein is an abundant protein during coronavirus infection and displays high immunogenic activity, making it a promising therapeutic target (5-7).

References:

1. Li, Y. *et al.* (2019) Engineering. **5**:940.
2. Hurst, K. R. *et al.* (2009) J. Virol. **83**:7221.
3. Wang, Y. *et al.* (2015) Acta. Crystallogr. F. Struct. Biol. Commun. **71**:977.
4. Papageorgiou, N. *et al.* (2016) Acta. Crystallogr. D. Struct. Biol. **72**:192.
5. Che, X. Y. *et al.* (2004) J. Clin. Microbiol. **42**:2629.
6. Guan, M. *et al.* (2004) Clin. Diagn. Lab. Immunol. **11**:287.
7. Chang, C-K. *et al.*(2016) Drug Discov. Today. **21**:562.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449