

PRODUCT INFORMATION

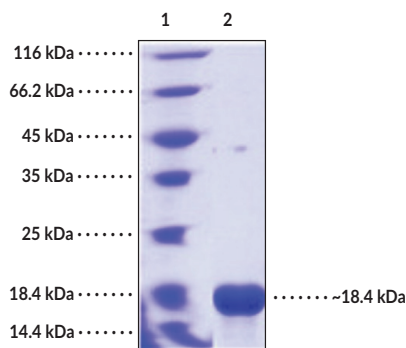
Ebola Virus Nucleoprotein (subtype Sudan, strain Gulu) (recombinant; aa 630-738)

Item No. 41064

Overview and Properties

Synonym: EBOV Nucleoprotein
Source: Recombinant Ebola virus N-terminal His-tagged nucleoprotein expressed in *E. coli*
Amino Acids: 630-738
Uniprot No.: Q5XX08
Molecular Weight: 14.8 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥95% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile 50 mM Tris, 500 mM sodium chloride
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Protein
Concentration: *batch specific* mg/ml
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers

Lane 2: Ebola Virus Nucleoprotein (subtype Sudan, strain Gulu)

SDS-PAGE Analysis of Ebola Virus Nucleoprotein (subtype Sudan, strain Gulu). This protein has a calculated molecular weight of 14.8 kDa. It has an apparent molecular weight of approximately 18.4 kDa by SDS-PAGE under reducing conditions.

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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Description

Ebola virus (EBOV) is an enveloped and negative-stranded RNA virus, a member of the *Ebolavirus* genus, and the causative agent of Ebola virus disease (EVD), a condition characterized by a hemorrhagic fever and a high mortality rate, that is endemic to western and equatorial Africa.¹ The single-stranded RNA genome of EBOV encodes seven proteins: nucleoprotein (NP), virion protein 40 (VP40), VP35, VP30, VP24, glycoprotein (GP), and an RNA-dependent RNA polymerase (L).^{1,2} Ebola virus NP is a 739-amino acid protein composed of an N-terminal domain, which is required for protein oligomerization and RNA binding, linked by an unstructured region to a C-terminal domain that functions as a protein-protein interaction hub and forms the viral nucleocapsid that encapsulates the RNA genome throughout the virus life cycle.^{3,4} This NP nucleocapsid is a protein-RNA complex acts as a scaffold for additional viral proteins, including L, the viral polymerase, to complete viral replication.⁴ Additionally, the Ebola virus NP is essential to viral genome replication, transcription, and maintenance of viral structure and protects the viral genome from host nucleases.³ Cayman's Ebola Virus Nucleoprotein (subtype Sudan, Strain Gulu) (recombinant; aa 630-738) consists of 108 amino acids and has a calculated molecular weight of 14.8 kDa. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is ~18.4 kDa.

References

1. Rojas, M., Monsalve, D.M., Pacheco, Y., *et al.* Ebola virus disease: An emerging and re-emerging viral threat. *J. Autoimmun.* **106**, 102375 (2020).
2. Salata, C., Calistri, A., Alvisi, G., *et al.* Ebola virus entry: From molecular characterization to drug discovery. *Viruses* **11**(3), 274 (2019).
3. Aceti, D.J., Ahmed, H., Westler, W.M., *et al.* Fragment screening targeting Ebola virus nucleoprotein C-terminal domain identifies lead candidates. *Antiviral Res.* **180**, 104822 (2020).
4. Kirchdoerfer, R.N., Saphire, E.O., and Ward, A.B. Cryo-EM structure of the Ebola virus nucleoprotein-RNA complex. *Acta Crystallogr. F Struct. Biol. Commun.* **75**(Pt. 5), 340-347 (2019).

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