

PRODUCT INFORMATION

Ebola Virus VP24 (subtype Zaire, strain *H. sapiens*-wt/GIN/2014/Kissidougou-C15) (recombinant)

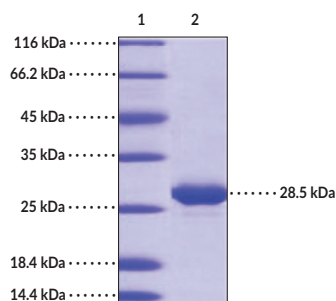
Item No. 41067

Overview and Properties

Synonyms:	EBOV Viral Protein 24, EBOV Virion Protein 24
Source:	Recombinant Ebola virus N-terminal His-tagged VP24 expressed in <i>E. coli</i>
Amino Acids:	1-233
Uniprot No.:	L7QHW5
Molecular Weight:	28.5 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 50 mM Tris, with 500 mM sodium chloride
Bioactivity:	See figures 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: Ebola Virus VP24 (subtype Zaire, strain *H. sapiens*-wt/GIN/2014/Kissidougou-C15)

SDS-PAGE Analysis of Ebola Virus VP24 (subtype Zaire, strain *H. sapiens*-wt/GIN/2014/Kissidougou-C15). This protein has a calculated molecular weight of 28.5 kDa.

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.

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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} EBOV VP24 is a monomeric structural protein that is composed of N- and C-terminal domains that form a pyramidal structure.⁴ It functions with VP35 and NP in nucleocapsid formation, and both N- and C-terminal domains of VP40 are required for proper nucleocapsid structure.^{1,3} EBOV VP24 disrupts the innate immune viral response by inhibiting expression of the gene encoding IFN- λ 1 and prevents phosphorylated STAT1 nuclear translocation and transcriptional activity in mammalian cells expressing VP40.^{1,4,5} Cayman's Ebola Virus VP24 (subtype Zaire, strain *H. sapiens*-wt/GIN/2014/Kissidougou-C15) (recombinant) protein consists of 233 amino acids and has a calculated molecular weight of 28.5 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. Banadyga, L., Hoenen, T., Ambroggio, X., et al. Ebola virus VP24 interacts with NP to facilitate nucleocapsid assembly and genome packaging. *Sci. Rep.* **7**(1), 7698 (2017).
4. Zhang, A.P.P., Bornholdt, Z.A., Liu, T., et al. The ebola virus interferon antagonist VP24 directly binds STAT1 and has a novel, pyramidal fold. *PLoS Pathog.* **8**(2), e1002550 (2012).
5. He, F., Melén, K., Malijanen, S., et al. Ebolavirus protein VP24 interferes with innate immune responses by inhibiting interferon- λ 1 gene expression. *Virology* **509**, 23-34 (2017).

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