Recombinant Sudan ebolavirus GP Protein, C-His-tagged

Cat. No. GP-11E **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Sudan ebola virus glycoprotein soluble domain (AA32-649) produced with a C-terminal His-tag in HEK293 cells and purified from culture supernatant by immobilized metal affinity chromatography. The protein is cleaved by furin into GP1 and GP2 upon expression. This protein is predominantly monomeric.
Species	Sudan ebolavirus
Source	HEK293
ProteinLength	32-649aa
Description	Ebola hemorrhagic fever (EHF) is a severe disease caused by several species of ebolavirus (EBOV), in the family Filoviridae. Prior to 2007, four species of EBOV had been identified, with two (Zaire ebolavirus and Sudan ebolavirus) having caused significant disease outbreaks in humans. The presence of a fifth EBOV virus species, Bundibugyo ebolavirus (BEBOV) was identified after an outbreak of EHF in the Bundibugyo District of western Uganda in 2007. Outbreaks of EHF are associated with person-to-person transmission after the virus is introduced into humans from a zoonotic reservoir. During outbreaks the virus is commonly transmitted through direct contact with infected persons or their bodily fluids. The onset of EHF is associated with nonspecific signs and symptoms, including fever, myalgias, headache, abdominal pain, nausea, vomiting, and diarrhoea. In the later stages of disease, overt haemorrhage has been reported in up to 50% of cases. The WHO declared an outbreak of Sudan subtype of the ebolavirus family in Uganda

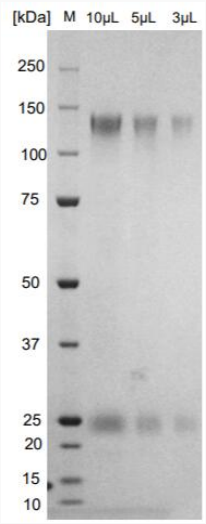
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	on the 20th of September 2022. As of 24th of November 2022 a total of 163 confirmed cases were confirmed, with a mortality rate of ~34% (Source: https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON425). The virus was discovered in 1977 during an outbreak in southern Sudan. Six outbreaks have been ascribed to Sudan ebolavirus, with case numbers ranging from 1 in 2011 to over 400 in 2001, both in Uganda. Symptoms caused by Sudan and Zaire ebolavirus are indistinguishable. There have been vaccine efforts by GSK, Geovax, Merck and the Jenner Institute but so far no licensed vaccine for Sudan ebolavirus is on the market. The EBOV envelope glycoprotein is initially produced as a precursor known as pre-GP, which is cleaved by furin into two subunits, GP1 and GP2, which remain associated through a disulfide linkage between amino acid 53 in GP1 and 609 in GP2. This heterodimer assembles into a 450-kDa trimer at the surface of nascent virions. The virion-attached GP is critical in the EBOV life cycle, as it is solely responsible for attachment, fusion and entry of target cells. Moreover, GP is responsible for critical pathogenic differences among viral species. Further information on the structure of EBOV GP and its facilitation of ebolavirus entry into cells is provided by Lee and Saphire (2009).
Form	Liquid
Molecular Mass	The protein is cleaved by furin at amino acid 501 and presents as 140kDa and 25kDa fragments on reducing SDS-PAGE.
Sequence Strain	Boniface 1976
Stability	Not performed
Storage	Short Term Storage: -80 centigrade. Long Term Storage: -80 centigrade. Can be frozen, but multiple freeze/thaw cycles are to be avoided.

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Concentration	0.70mg/ml
Storage Buffer	Dulbecco's phosphate buffered saline (DPBS pH7.4).

GENE INFORMATION

Gene Name	GP second secreted glycoprotein;small secreted glycoprotein;spike glycoprotein [Sudan ebolavirus]
Official Symbol	GP
Gene ID	3160774
Protein Refseq	YP_138523.1
UniProt ID	Q66814
SDS-PAGE	

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