Recombinant Zaire ebolavirus GP Protein, C-His-tagged

Cat. No. GP-02E **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Ebolavirus (subtype Zaire, strain Kikwit-95) Envelope Glycoprotein (GP), comprising amino-acids 33-637. This protein is produced in mammalian cells with greater than 85% purity and incorporates a C-terminal 6x His-tag.
Species	Zaire Ebola virus
Source	HEK293
ProteinLength	33-637aa
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 andSudan 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 Zaire subtype of the Ebola virus family is currently the most important in relation to outbreaks of disease in humans. This subtype has been responsible for the largest

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	ever outbreak of EHF, which started in West Africa in 2014, and was finally declared over only in early 2016. The Kikwit-95 strain was isolated from an outbreak occurring in the city of Kikwit in Zaire in 1995. This outbreak has been especially well studied. There were 314 cases, with 244 fatalities, a mortality rate of greater than 75%. Ebola virus 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 Cys53 of GP1 and Cys609 of 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. The role of Ebola virus envelope glycoprotein (GP) in EBOV pathogenesis is unclear, but is examined in detail by Lee and Saphire (2009).
Form	Lyophilised
Molecular Mass	The total calculated MW of Ebola envelope glycoprotein (GP) is 67kDa. DTT-reduced protein migrates as two bands of 21-23kDa (GP2) and 110-120kDa (GP1) in SDS-PAGE and is greater than 905 pure.
Purity	>90% pure by SDS-PAGE
Stability	Stability before reconstitution: At ambient temperature: 1 month; At 4 centigrade: 12 months; At <-20 centigrade: 24 months Stability after reconstitution: At -80°C: 3 months Freezing: Can be frozen, but avoid multiple freeze/thaw cycles
Storage	Store lyophilised product at 4 centigrade for short term, or frozen at -20 centigrade to -80 centigrade for long term. Product is shipped at ambient temperature.

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Concentration	Dependent upon reconstitution volume.
Storage Buffer	DPBS pH 7.4.
Reconstitution	It is recommended to reconstitute the protein by adding 500ul sterile water to a stock solution of 200µg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. We recommend the addition of carrier protein (0.1% (w/v) BSA) for further dilution and long-term storage.

GENE INFORMATION

Gene Name	GP second secreted glycoprotein;small secreted glycoprotein;spike glycoprotein [Zaire ebolavirus]
Official Symbol	GP
Gene ID	911829
Protein Refseq	NP_066246.1
UniProt ID	P87671

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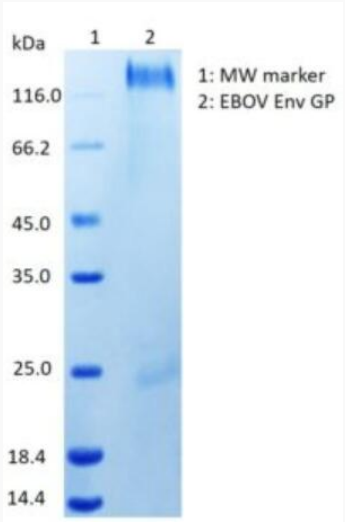
SDS-PAGE	 Coomassie-stained SDS-PAGE (reducing) showing Ebola virus envelope glycoprotein.

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