

Recombinant Ebolavirus EBOV (subtype Zaire, strain Kikwit-95) Envelope Glycoprotein (GP) protein, His-tagged

Cat. No. GP-385E **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Ebolavirus EBOV (subtype Zaire, strain Kikwit-95) Envelope Glycoprotein (GP) protein (Ile33-Asp637), containing GP1 and GP2, was fused to His tag at C-terminus and expressed in human 293 cells (HEK293).

Species

EVD

Source

HEK293

ProteinLength

605

Description

EBOV encodes seven structural proteins: nucleoprotein (NP), polymerase cofactor (VP35), (VP40), GP, transcription activator (VP30), VP24, and RNA polymerase (L). GP protein contains 160-kDa envelope-attached glycoprotein (GP) and a 110 kDa secreted glycoprotein (sGP). GP is a class I fusion protein which assembles as trimers on viral surface and plays an important role in virus entry and attachment. Mature GP is a disulfide-linked heterodimer formed by two subunits, GP1 and GP2, which are generated from the proteolytical process of GP precursor (pre-GP) by cellular furin during virus assembly. GP1 is responsible for binding to the receptor(s) on target cells. Interacts with CD209/DC-SIGN and CLEC4M/DC-SIGNR which act as cofactors for virus entry into the host cell. GP2 acts as a class I viral fusion protein. GP1,2 mediates endothelial cell activation and decreases endothelial barrier function. sGP seems to possess an anti-inflammatory activity as it can reverse the barrier-decreasing effects of TNF alpha.

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Form	Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 67.0 kDa. The reducing (R) protein migrates as 21-23 kDa (GP2-delta) and 110-120 kDa (GP1) in SDS-PAGE.
Endotoxin	Less than 1.0 EU per ug by the LAL method.
Purity	>85% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	GP
Official Symbol	GP
Synonyms	ZEBOVgp4
Gene ID	911829
Protein Refseq	NP_066246.1

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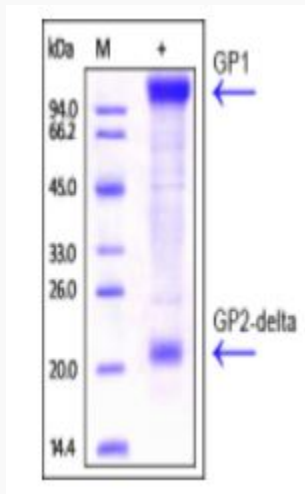
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UniProt ID

P87666

SDS-PAGE of GP-385E



Ebolavirus EBOV (subtype Zaire, strain Kikwit-95) GP, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 85%.

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