Recombinant Zaire ebolavirus GP, His-tagged

Cat. No. GP-19Z **Lot. No.** (See product label)

SPECIFICATION

Product Overview	A DNA sequence encoding the Zaire ebolavirus (strain Mayinga 1976) GP (Met1-Phe308) was expressed with a polyhistidine tag at the C-terminus.
Species	Zaire Ebola virus
Source	Human Cells
ProteinLength	1-308 a.a.
Description	The fourth gene of the EBOV genome encodes a 160-kDa envelope-attached glycoprotein (GP) and a 110 kDa secreted glycoprotein (sGP). Both GP and sGP have an identical 295-residue N-terminus, however, they have different C-terminal sequences. Recently, great attention has been paid to GP for vaccines design and entry inhibitors isolation. 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 . The GP1 subunit contains a mucin domain and a receptor-binding domain (RBD); the GP2 subunit has a fusion peptide, a helical heptad-repeat (HR) region, a transmembrane (TM) domain, and a 4-residue cytoplasmic tail. The RBD of GP1 mediates the interaction of EBOV with cellular receptor (e.g. DC-SIGN/LSIGN, TIM-1, hMGL, NPC1, β-integrins, folate receptor-α, and Tyro3 family receptors), of which TIM1 and NPC1 are essential for EBOV entry; the mucin domain having N- and O-linked glycans enhances the viral attachment to cellular hMGL, and

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	participates in shielding key neutralization epitopes, which helps the virus evades immune elimination. There are large conformation changes of GP2 during membrane fusion, which enhance the insertion of fusion loop into cellular membrane and facilitate the release of viral nucleocapsid core to cytoplasm.
Predicted N Terminal	Ile 33
Form	Lyophilized from sterile PBS, pH 7.4.
Molecular Mass	The recombinant Zaire ebolavirus (strain Mayinga 1976) GP consists 287 amino acids and predicts a molecular mass of 32.3 kDa.
Endotoxin	<1.0 eu per μg protein as determined by the lal</1.0
Purity	>95 % as determined by SDS-PAGE.
Stability	Samples are stable for up to twelve months from date of receipt at -70oC.
Storage	Store it under sterile conditions at -20oC to -80oC. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products.?
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	GP virion spike glycoprotein precursor [Zaire ebolavirus]

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Official Symbol	GP
Synonyms	GP; EBOV-G; Glycoprotein; spike glycoprotein; virion spike glycoprotein; small secreted glycoprotein; second secreted glycoprotein; NP_066246.1; an addition A residue is inserted during transcription; encodes two disulfide linked subunits GP1 and GP2; NP_066247.1; sGP secreted as a anti-parallel oriented homodimer; NP_066248.1; second non-structural secreted glycoprotein; secreted in a monomeric form; one A residue is deleted or two additional A residues are inserted at the editing site during transcription of the GP gene
Gene ID	911829
Protein Refseq	NP_066246
UniProt ID	AAD14585

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