

Recombinant EBOV (Subtype Sudan, strain Gulu) Glycoprotein / GP1 (mucin domain deleted) Protein (His Tag)

Catalog Number: PKSV030142

Note: Centrifuge before opening to ensure complete recovery of vial contents.

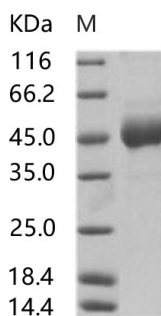
Description

Species	EBOV
Source	Baculovirus-Insect Cells-derived EBOV EBOV (Subtype Sudan, strain Gulu) Glycoprotein / GP1 (mucin domain deleted) protein Met1-Asp320, with an C-terminal His
Calculated MW	33.8 kDa.
Accession	Q7T9D9.1
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20 mM Tris, 500 mM NaCl, 10 % glycerol, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Reconstitution	Please refer to the specific buffer information in the printed manual.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

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The fourth gene of the EBOV genome encodes a 16-kDa envelope-attached glycoprotein (GP) and a 11 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 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.

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