# Recombinant EBOV (subtype Zaire, strain H.sapiens-wt/GIN/2014/Kissidougou-C15) Glycoprotein / GP Protein (His Tag)

**Catalog Number: PKSV030151**

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

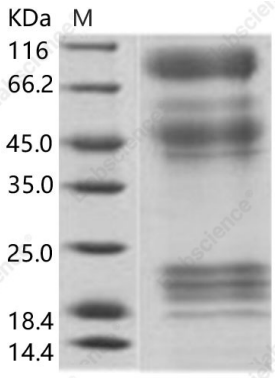
## Description

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|---|---|
| **Species** | EBOV |
| **Source** | Baculovirus-Insect Cells-derived EBOV EBOV (subtype Zaire, strain H.sapiens-wt/GIN/2014/Kissidougou-C15) Glycoprotein / GP protein Met1-Gln650, with an C-terminal His |
| **Calculated MW** | 69.3 kDa |
| **Accession** | AHX24649.1 |
| **Bio-activity** | Not validated for activity |

## Properties

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|---|---|
| **Purity** | > 85 % 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 20mM Tris,500mM NaCl,10% Glycerol, pH 7.5. |
| **Reconstitution** | Please refer to the printed manual for detailed information. |

## Data




> 85 % as determined by reducing SDS-PAGE.

## Background

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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