Ebolavirus EBOV (subtype Zaire, strain Kikwit-95) Envelope Glycoprotein (GP) Protein, His Tag

Catalog # ZE5-V5221

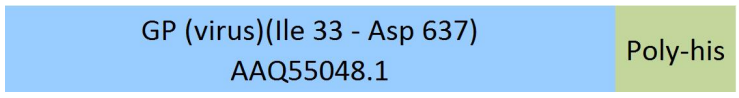
Synonym

Glycoprotein/GP (EBOV)

Source

Ebolavirus EBOV (subtype Zaire, strain Kikwit-95) GP, His Tag(ZE5-V5221) is expressed from human 293 cells (HEK293). It contains AA Ile 33 - Asp 637 (Accession # AAQ55048.1).
Predicted N-terminus: Ile 33

Molecular Characterization



Ebolavirus EBOV (subtype Zaire, strain Kikwit-95) GP, His Tag, containing GP1 and GP2, is fused with a polyhistidine tag at the C-terminus, and has a calculated MW of 67.2 kDa. The reducing (R) protein migrates as 21-23 kDa (GP2-delta) and 110-120 kDa (GP1) when calibrated against Star Ribbon Pre-stained Protein Marker in SDS-PAGE.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>85% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

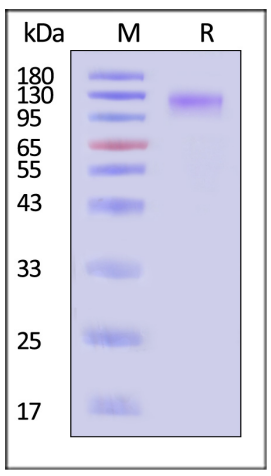
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



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

Background

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.