



## Synonym

GP,Envelope glycoprotein,GP(1,2)

## Source

Ebolavirus (subtype Bundibugyo, strain Uganda 2007) GP1 Protein, His Tag(BEP-V5221) is expressed from human 293 cells (HEK293). It contains AA Ile 33 - Gln 304 (Accession # [B8XCNO](#)).  
Predicted N-terminus: Ile 33

## Molecular Characterization

GP (virus)(Ile 33 - Gln 304)  
B8XCNO Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 31.8 kDa. The protein migrates as 40-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>90% 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

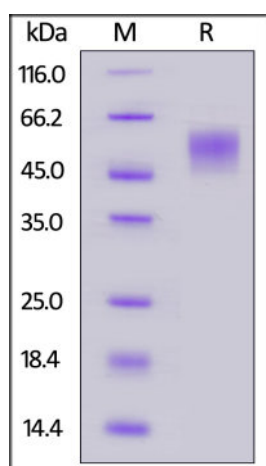
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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 (subtype Bundibugyo, strain Uganda 2007) GP1 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## 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

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# Ebolavirus (subtype Bundibugyo, strain Uganda 2007) Envelope Glycoprotein 1 (GP1) Protein, His Tag



Catalog # BEP-V5221

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.

## Clinical and Translational Updates

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