

Ebola virus Glycoprotein/GP Protein (AHX24649, HEK293, His)

Cat. No.:	HY-P75274
Synonyms:	Ebola virus EBOV (subtype Zaire, strain H.sapiens-wt/GIN/2014/Kissidougou-C15) Glycoprotein / GP (Virion spike glycoprotein) Protein (His)
Species:	Virus
Source:	HEK293
Accession:	AHX24649 (M1-Q650, deletion of T309-N484)
Gene ID:	/
Molecular Weight:	Approximately 54.8 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>The trimeric GP_{1,2} complexes of the Ebola virus Glycoprotein (GP) play a crucial role in viral entry processes, where GP₁ serves as the receptor-binding subunit and GP₂ acts as the membrane fusion subunit. During later stages of infection, GP down-regulates the expression of various host cell surface molecules, including integrins such as ITGA1, ITGA2, ITGA3, ITGA4, ITGA5, ITGA6, ITGAV, and ITGB1, disrupting cell adhesion and contributing to the detachment of cells, potentially leading to blood vessel integrity disruption and hemorrhages. GP also interacts with host TLR4, stimulating the differentiation and activation of monocytes, resulting in bystander death of T-lymphocytes. Additionally, GP counteracts the antiviral effect of host BST2/tetherin, cooperates with VP40 and host BST2 to activate the canonical NF-κB pathway, and functions as a decoy for anti-GP_{1,2} antibodies, contributing to viral immune evasion. Moreover, GP interacts with and activates host macrophages and dendritic cells, inducing the up-regulation of cytokine transcription through the activation of host TLR4.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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