Recombinant Viral EBOV GP

Catalog Number: 9016-EB

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived

Z. ebolavirus GP1 (Ile33-Arg501) Accession # Q05320	
Z. ebolavirus GP2 (Glu502-Gln650) Accession # Q05320	HHHHHH

N-terminus C-terminus

N-terminal Sequence Analysis	Ile33 (GP1) & Glu502 (GP2)
Structure / Form	Disulfide-linked heterodimer
Predicted Molecular Mass	69 kDa

SPECIFICATIONS

SDS-PAGE	17-24 kDa and 105-120 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Viral EBOV GP is immobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Human CLEC10A/CD301 (Catalog # 4888-CL) that produces 50% of the optimal binding response is approximately 20-100 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in Tris and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in water.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The GP glycoprotein encoded by the genome of Ebola family viruses is a critical molecule for the pathogenicity of *Ebolavirus* hemorrhagic viruses (1, 2). It is processed into distinct forms for virus capsule or cell surface presentation or release from virus infected cells. The GP precursor protein is cleaved by furin at a multibasic site to yield a 140 kDa N-terminal fragment (GP1) and a 26 kDa C-terminal fragment (GP2) which remain disulfide linked (3). GP1 is entirely extracellular while GP2 is a transmembrane protein (4). Heterodimers of GP1-GP2 can further associate into trimers (5). GP expressed on virus infected cells can be shed by TACE mediated cleavage, liberating a disulfide linked complex of soluble GP1 and truncated GP2 (4-6). GP binds to multiple C-type lectins on target cell surfaces, including CLEC10A/MGL, DC-SIGN, and DC-SIGNR (7-9). Following internalization, GP1 is cleaved by Cathepsin B and Cathepsin L and then interacts with Niemann-Pick C1 (NPC1) in the endosomal membrane (10-12).

References:

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