ALPHA DIAGNOSTIC INTERNATIONAL

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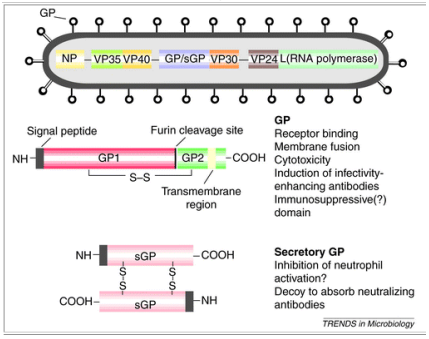
Product Specification Sheet

Recombinant (sf9) Bundibugyo Ebola virus glycoprotein

□ **Cat #** BVGP45-R-10	Recombinant (sf9) Bundibugyo Ebola virus glycoprotein/GP (1-650 a.a, his tag, >95%) purified	**SIZE**: 10 ug
□ **Cat #** BVGP45-R-100	Recombinant (sf9) Bundibugyo Ebola virus glycoprotein/GP (1-650 a.a, his tag, >95%) purified	**SIZE**: 100 ug

Ebola virus (EBOV, formerly Zaire Ebola virus**)** causes severe disease in humans and in nonhuman primates in the form of viral hemorrhagic fever.. Zaire ebolavirus is a virological taxon included in the genus Ebolavirus, family Filoviridae, order Mononegavirales. The species has a single virus member, Ebola virus (EBOV). **Ebolavirus species Bundibuygo** (BEBOV) causes highly lethal hemorrhagic fever, resulting in the death of **~40%** of patients within days Most information on immune responses to ZEBOV comes from in vitro studies and animal models. Ebola Zaire attacks every organ and tissue in the human body except skeletal muscle and bone. Ebola is classified as a **Level 4** pathogen (higher than AIDS) with a 2 to 21 day (7 to 14 days average) incubation period. There are currently five known strains of Ebola: **Bundibugyo**, **Zaire**, **Sudan, Reston and Tai**. All cause illness in sub-human primates. Only Ebola Reston does not cause illness in humans. The mortality rate of Ebola victims is between 60% and 90%; with Ebola Sudan at 60% and Ebola Zaire at 90%.

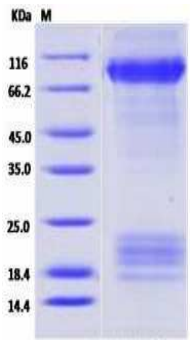
The virions are tubular in general form but variable in overall shape and may



appear as the classic shepherd's crook or eyebolt. Ebola virions consist of 7 structural proteins. At the center is the helical **ribonucleocapsid,** which consists of the genomic RNA wrapped around a polymer of **nucleoproteins (NP**). Associated with the ribonucleoprotein is the RNA-dependent **RNA polymerase (L)** with the **polymerase cofactor (VP35)** and a **transcription activator (VP30).** The ribonucleoprotein is embedded in a matrix, formed by the major (VP40) and minor (VP24) matrix proteins. They are surrounded by a **lipid membrane** derived from the host cell membrane. The membrane anchors a glycoprotein (GP1,2) that projects 7 to 10 nm spikes away from its surface. While nearly identical to **Marburg virions** in structure, ebola virions are antigenically distinct.

The most common diagnostic methods are RT-PCR in conjunction with antigen-capture ELISA which can be performed in field or mobile hospitals and laboratories. There are currently no FDA-approved vaccines for the prevention of EVD. The most promising ones are DNA vaccines or are based on adenoviruses, vesicular **stomatitis Indiana virus (VSIV) or filovirus-like particles (VLPs**) as all of these candidates could protect nonhuman primates from Ebola virus-induced disease. DNA vaccines, adenovirus-based vaccines, and VSIV-based vaccines have entered clinical trials.

Source of Antigen



Recombinant Bundibugyo Ebola virus glycoprotein is expressed in sf9 cells with a his tag (accession#AAC54887.1, 1-650 a.a, >95%, ~69 KDa). Purified protein is supplied in PBS (supplemented with 10% glycerol, arginine and glutamic acid (see lot sp. Conc. on the vial).
It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Endotoxin level: < 1.0 EU per µg protein as determined by the LAL method.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting: load 50-200 ng/well.

ELISA (10-100 ng antigen/well).

Histochemistry & Immunoflourescence: not tested.

Specificity & Cross-reactivity:

Bundibugyo Ebola GP protein is significantly conserved in various Ebola serotypes: Zaire (65%), Tai (73%), Sudan (55%), Reston (58%). Antibodies and recombinant GP proteins from various Ebola and Marburg viruses are available for control studies.

References: Volchkov VE(1998) Natl Acad Sci U S A. 12;95(10):5762-7. Lee JE, et al. (2008) Nature 454 (7201):177-82; Hood CL, et al (2010) 84(6):2972-82; Cook JD (2013) 9(5):e1003258; Miller EH (2012) 2(2):206-14

*This product is for In vitro research use only.

Related material available from ADI

BVGP45-R-10	Recombinant (sf9) Bundibugyo Ebola virus glycoprotein/GP (Uganda 2007,1-501aa, his tag, >95%) purified
BVRB46-R-10	Recombinant (HEK) Bundibugyo Ebola virus glycoprotein RBD domain (Uganda/2007/1-308aa, hIgG1-Fc-tag at CT, low endotoxin)
EVGP18-R-10	Recombinant (sf9) Zaire Ebola virus glycoprotein 1 (GIN/2014/Kissidougou-C15, GP1, 1-501aa, his-tag at CT, >95%), Low endotoxin
EVGP20-R-10	Recombinant (sf9) Zaire Ebola virus glycoprotein (GIN/2014/Kissidougou-C15, 1-650aa, his-tag at CT, >95%), low endotoxin
EVGP21-R-10	Recombinant (HEK) Zaire Ebola virus glycoprotein (GIN/2014/Kissidougou-C15, 1-650aa, his-tag at CT, >95%), low endotoxin
EVGP31-R-10	Recombinant (HEK) Zaire Ebola virus glycoprotein/GP (Mayinga 1976, 1-650aa, his-tag at CT, >95%), low endotoxin
EVGP32-R-10	Recombinant (HEK) Zaire Ebola virus glycoprotein 2 (GP2, GIN/2014/Kissidougou-C15, GP2, 501-650aa, mFc-tag, >95%), low endotoxin
EVGP33-R-10	Recombinant (HEK) Zaire Ebola virus glycoprotein 1 (GIN/2014/Kissidougou-C15, GP1, 1-501aa, his-tag, >95%), low endotoxin
EVGP33-R-100	Recombinant (HEK) Zaire Ebola virus glycoprotein 1 (GIN/2014/Kissidougou-C15, GP1, 1-501aa, his-tag, >95%), low endotoxin
EVRB11-R-10	Recombinant (HEK) Zaire Ebola virus glycoprotein RBD
SVGP24-BTN	Biotin-Recombinant (HEK) Sudan-Ebola virus glycoprotein (Gulu, 1-637aa, his-tag at CT, >95% low endotoxin)
SVGP24-R-10	Recombinant (HEK) Sudan-Ebola virus glycoprotein (Gulu, 1-637aa, his-tag at CT, >95% low endotoxin)
SVGP28-R-100	Recombinant (HEK) Sudan Ebola virus glycoprotein 1 (Uganda, 1-501aa, his-tag, >95%), low endotoxin
SVGP29-R-10	Recombinant (HEK) Sudan-Ebola virus glycoprotein (Uganda, 1-637aa, his-tag at CT, >95%, low endotoxin)
SVGP29-R-100	Recombinant (HEK) Sudan-Ebola virus RBD domain (Gulu, 1-320aa, Fc-tag at CT, >95%, low endotoxin)
SVNP27-R-10	Recombinant (E.coli) Sudan Ebola virus nucleoprotein (EBOV NP) (Uganda, 630-738aa, his-tag, >95%)
SVNP27-R-100	Recombinant (E.coli) Sudan Ebola virus nucleoprotein (EBOV NP) (Uganda, 630-738aa, his-tag, >95%)
SVRB11-R-10	Recombinant (HEK) Sudan-Ebola virus RBD domain (Uganda-00, 1-320aa, his-tag, low endotoxin), purified
SVRB11-R-100	Recombinant (HEK) Sudan-Ebola virus RBD domain (Uganda-00, 1-320aa, his-tag, low endotoxin), purified

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