ALPHA DIAGNOSTIC INTERNATIONAL

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

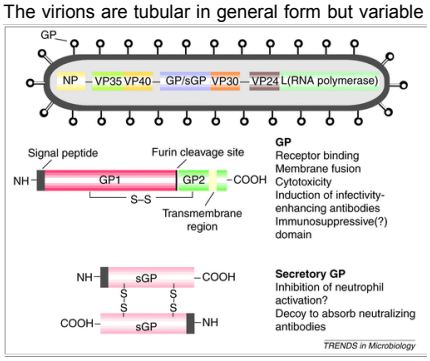
Product Specification Sheet

Recombinant Sudan Ebola virus glycoprotein1

☐ **Cat #** SVGP28-R-10	Recombinant (HEK) Sudan Ebola virus glycoprotein 1 (Uganda, 1-501aa, his-tag, >95%), low endotoxin	**SIZE**: 10 ug
☐ **Cat #** SVGP28-R-100	Recombinant (HEK) Sudan Ebola virus glycoprotein 1 (Uganda, 1-501aa, his-tag, >95%), low endotoxin	**SIZE**: 100 ug

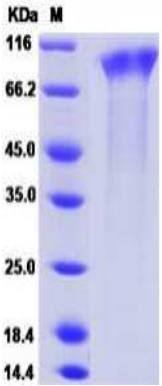
Ebola virus (EBOV, formerly Zaire ebolavirus**)** causes severe disease in humans and in nonhuman primates in the form of viral hemorrhagic fever.. Zaire ebolavirus is a virological taxon included in the genus Ebolavirus, family Filoviridae, order Mononegavirales. The species has a single virus member, Ebola virus (EBOV). **Ebolavirus species Zaire** (ZEBOV) causes highly lethal hemorrhagic fever, resulting in the death of **90%** 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 four known strains of Ebola: **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 Sudan Ebola virus GP1 Cat#SVGP28-R-10 (Uganda, protein accession (YP_138523.1) was expressed with a his tag at the C-terminus. (1-501aa, >95%). Purified protein is supplied in PBS supplemented with 5% Trehalose, 5% mannitol, 0.01% Tween80. (See lot sp. Conc. On the vial) Due to glycosylation the proteins migrates ~110 kda in reducing conditions.

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 –20°C
Long-term: at –80°C 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 & Immunofluorescence: not tested.

Specificity & Cross-reactivity: Sudan Ebola GP protein is significantly conserved in various serotypes: Bundibugyo (55%), Tai (57%), Reston (59%), Zaire (55%). Antibodies and recombinant GP proteins from various Ebola and Marburg viruses are available for control studies.

References: Thomas W (2010) Archives of Virology 155 (12): 2083–103. Taylor D (2010) BMC Evolutionary Biology 10: 193. Feldmann H (2005) . A. Virus Taxonomy—Eighth Report of the International Committee on Taxonomy of Viruses. 645–653.

*This product is for In vitro research use only.

Related material available from ADI

http://www.4adi.com/objects/catalog/product/extras/Ebola_Marburg_Vaccines_ELISA_Flr.pdf

SVGP21-A Rabbit Anti-Sudan Ebola virus glycoprotein (sf9, SUDV GP) IgG purified
SVGP21-C Recombinant (sf9) Purified Sudan-Ebola virus glycoprotein protein control for Western
SVGP22-M Mouse Monoclonal Anti-Sudan Ebola virus glycoprotein (SUDV GP) IgG, purified
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)
SVGP25-BTN Biotin-Recombinant (sf9) Sudan-Ebola virus glycoprotein (Uganda,1-637 aa, his-tag at CT >95%), low endotoxin
SVGP25-R-10 Recombinant (sf9) Sudan-Ebola virus glycoprotein (Uganda,1-637 aa, his-tag at CT >95%), low endotoxin
SVGP28-R-10 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)

AE-321600-1 Mouse Anti-Sudan Ebola virus glycoprotein (GP) IgG ELISA Kit, 96 tests, Quantitative
AE-321610-1 Mouse Anti-Sudan Ebola virus glycoprotein (GP) IgM ELISA Kit, 96 tests, Quantitative
AE-321620-1 Human Anti-Sudan Ebola virus glycoprotein (GP) IgG ELISA Kit, 96 tests, Quantitative
AE-321630-1 Human Anti-Sudan Ebola virus glycoprotein (GP) IgM ELISA Kit, 96 tests, Quantitative
AE-321640-1 Rabbit Anti-Sudan-Ebola virus glycoprotein (GP) IgG ELISA Kit, 96 tests, Quantitative
AE-321650-1 Monkey/Chimp Anti-Sudan Ebola virus glycoprotein (GP) IgG ELISA Kit, 96 tests, Quantitative
AE-321660-1 Monkey/Chimp Anti-Sudan Ebola virus glycoprotein (GP) IgM ELISA Kit, 96 tests, Quantitative

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com