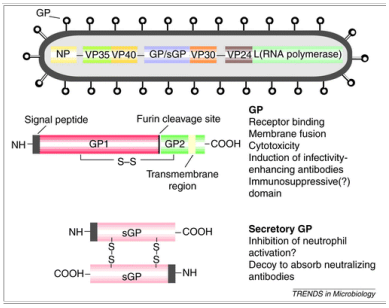
ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Reston Ebola virus glycoprotein (REBOV GP) Antibodies and Controls

☐ **Cat** # RVGP31-A	Rabbit anti-Reston Ebola virus glycoprotein (REBOV GP) peptide IgG aff pure	**SIZE**: 100 ul
☐ **Cat** # RVGP31-C	Rec. Purified Reston Ebola virus Glycoprotein (REBOV GP) control for western blot	**SIZE**: 100 ul

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 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 and Antibodies

Antigen	A peptide sequence to Reston Ebola virus glycoprotein
Ab Host/type	Rabbit, Polyclonal IgG Aff. pure (Cat# RVGP31-A). Supplied in PBS, PH 7.4, 0.1% BSA and with 0.05% sodium azide as preservative.
2-Ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates)
-ve control IgG	#20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Cat#RVGP31-C, positive control

Recombinant Reston Ebola Virus glycoprotein was expressed in sf9 cells as his-tag fusion protein (minus transmembrane region, >95%, ~72 KDa migrates as ~110 kda). Purified glycoprotein for Western blot +ve control (Cat# RVGP31-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # RVGP31-C for good visibility with antibody Cat # RVGP31-S. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should be re dissolved by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the # RVGP31-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form Form & Storage of Antibodies/Peptide Control

Antibody

☐ 100 ul ☐ solution ☐ lyophilized powder

Buffer: PBS+0.01% azide **Reconstitute powder** 100 ul water

Storage

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

Long-term: at –20ºC 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: Assay-dependent dilution (range 1:200-:1000). The antibody detected recombinant Reston Ebola virus GP when tested at 50-500 ng/ml. Use ADI #RVGP31-C as western control.

ELISA: Assay dependent. (1:1000-10,00; using 100-200 ng antigen/well). Use ADI #RVGP35-R-10.

Histochemistry & Immunoflourescence: not tested.

Specificity & Cross reactivity: This antibody reacts to the glycoprotein region of Reston Ebola virus. cross reactivity with other subtypes has not been observed. Reston Ebola GP protein is significantly conserved in various serotypes: Bundibugyo (58%), Tai (57%), Sudan (59%), Zaire (56%), 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

AE-320520-1	Human Anti-Ebola virus Nucleoprotein (NP) IgG ELISA Kit,
AE-320530-1	Human Anti-Ebola virus Nucleoprotein (NP) IgM ELISA Kit
AE-320620-1	Human Anti-Zaire-Ebola virus glycoprotein (GP) IgG ELISA
AE-320720-1	Human Anti-Zaire-Ebola virus VP40 IgG ELISA Kit,
AE-320730-1	Human Anti-Zaire-Ebola virus VP40 IgM ELISA Kit,
AE-320800-48	Human Zaire-Ebola Virus antigen ELISA Kit, 48 tests,
AE-320800-96	Human Zaire-Ebola Virus antigen ELISA Kit, 96 tests,

RVGP31-A	241113	140927A

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