

Product Specification Sheet

**Zaire Ebola virus Monoclonal Antibody**

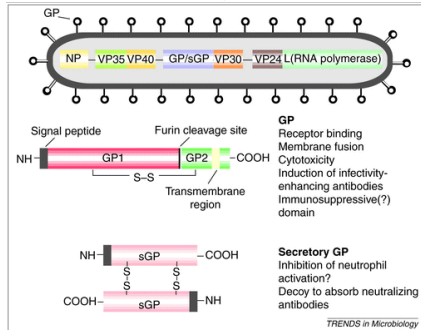
□ Cat # EVZ14-M

Mouse Monoclonal Anti-Zaire Ebola virus IgG (mixture of EVZ12-M and EVZ13-M), aff pure

SIZE: 100 ul

**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 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 and Antibodies**

<b>Antigen</b>	Formalin-inactivated purified Ebola virus
<b>Ab Host/type</b>	Mouse monoclonal IgG2a (EVZ12-M and EVZ13-M). supplied with 0.05% Sodium azide as preservative
<b>2-Ab</b>	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Isotype Controls for mouse IgG2a**

20102-102 Mouse IgG2a isotype control, purified  
 20102-102-B Mouse IgG2a-Biotin conjugate (isotype control)  
 20102-102-F Mouse IgG2a-FITC conjugate (isotype control)

20102-102-FP Mouse IgG2a-FITC-PE conjugate  
 20102-102-HP Mouse IgG2a-HRP conjugate (isotype control)  
 20102-102-PC5 Mouse IgG2a-PE-Cy5 conjugate (isotype control)  
 20102-102-PE Mouse IgG2a-PE conjugate (isotype control)

**Form & Storage of Antibodies/Peptide Control**

**Antibody**

□ 100 ul □ solution □ lyophilized powder  
 Buffer: PBS+0.05% azide

**Reconstitute powder** 100 ul of PBS.

**Storage**

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

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

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting:** Users must optimize antibody dilution depending upon the nature of samples and other technical conditions. Suggested dilution of 1:500-1:2000 usign 20-100 ng protein/lane.

**ELISA (1:10-50K; using 50-100 ng antigen/well).**

**Histochemistry & Immunofluorescence:** not tested.

**Specificity & Cross-reactivity:** Antibodies reacts to the Zaire ebola virus proteins 110-120 kDa under non-reducing conditions and ~30 kDa protein band under reducing conditions. Antibody Cross-reactivity with ebola viruses of other serotypes (Sudan, Bundibugyo, Reston etc) has not been established.

**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. Cote M (2011) Nature 477 (7364): 344–8. Flemming A (2011) Nat Rev Drug Discov 10 (10): 731.

\*This product is for In vitro research use only.

**Related material available from ADI**

EVGP11-A Anti-Ebola virus glycoprotein (Recombinant) IgG, purified  
 EVGP11-C Recombinant (sf9) Zaire-Ebola virus glycoprotein protein control WB  
 EVGP15-A Anti-Zaire Ebola virus glycoprotein (GP, 1-676aa/DNA vaccine) IgG,  
 EVGP16-A Anti-Zaire Ebola virus glycoprotein (GP 1-652aa/DNA vaccine) IgG,  
 EVGP16-R-10Recombinant (sf9) Sudan-Ebola virus glycoprotein (minus transmembrane domain, his-tag, 68 kda), purified  
 EVGP17-R-10Recombinant (sf9) Zaire-Ebola virus glycoprotein (minus transmembrane domain, his-tag, 68 kda), purified  
 EVNP12-M Monoclonal Anti-Zaire-Ebola virus IgG, aff pure  
 EVNP13-A Anti-Zaire-Ebola virus nucleoprotein (EBOV NP, 1-739/DNA vaccine) IgG,  
 EVP401-A Anti-Zaire-Ebola virus VP40 peptide (EBOV VP40) IgG, aff pure  
 EVP401-C Recombinant Zaire-Ebola virus VP40 protein control for Western  
 EVP405-R-10 Recombinant (E.coli) Zaire-Ebola virus VP40  
 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,

EVZ14-M 140901A