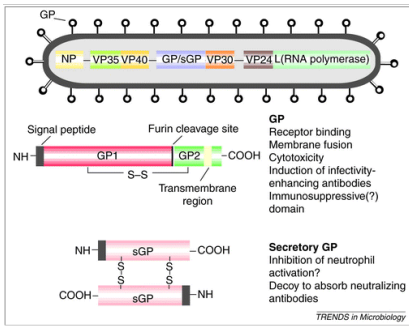


**Product Specification Sheet**

**Ebola virus Nucleoprotein Antibodies and Controls**

<input type="checkbox"/> Cat # EVNP11-S	Rabbit Anti-Zaire-Ebola virus nucleoprotein (Mayinga EBOV NP) protein antiserum	<b>SIZE:</b> 100 ul
<input type="checkbox"/> Cat # EVNP11-C	Recombinant Zaire-Ebola virus nucleoprotein (Mayinga EBOV NP) protein control for Western	<b>SIZE:</b> 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 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>	Recombinant (E.coli) Zaire-Ebola virus nucleoprotein (Mayinga 1976, 19-739aa, protein accession AF086833.2 #~82 kda)
<b>Ab Host/type</b>	Rabbit, Polyclonal antiserum (Cat# EVNP11-S). Supplied in 0.01% Sodium Azide as preservative.
<b>2-Ab</b>	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates)
<b>-ve control IgG</b>	Cat# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Cat#EVNP11-C, positive control**

Zaire-Ebola Virus Nucleoprotein (NP) was expressed in E.coli as his-tag fusion protein (full length, >95%, ~82 KDa). Purified glycoprotein for Western blot +ve control (Cat# EVNP11-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # EVNP11-C for good visibility with antibody Cat # EVNP11-S. Store at -200c 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 # EVNP11-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 & Storage of Antibodies/Peptide Control**

**Antiserum**

100 ul  solution  lyophilized powder  
Buffer: PBS+0.01% azide  
**Reconstitute powder** 100 ul of PBS.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 40C.  
**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 -200c or below.

**Shipping:** 40C for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting:** An initial dilution of 1:500-2,000 is recommended for Western.

**ELISA:** 1:1000-1:5,000; using 50-100 ng antigen/well.

**Histochemistry & Immunofluorescence:** not tested.

**Specificity & Cross-reactivity**

This antibody reacts to the nucleoprotein of Zaire Ebola virus (~82 Kda). Cross-reactivity with other subtypes has not been established. Zaire Ebola NP protein is significantly conserved in various Ebola serotypes: Bundibugyo (75%), D'Ivoire (75%), Sudan (67%), Reston (69%). EVNP11-C, western blot protein control is 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](http://www.4adi.com/objects/catalog/product/extras/Ebola_Marburg_Vaccines_ELISA_Flr.pdf)

EVGP11-A	Anti-Ebola virus glycoprotein (Recombinant) IgG, purified
EVGP11-C	Rec. (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-10	Rec. (sf9) Sudan-Ebola virus glycoprotein (minus transmembrane domain, his-tag, 68 kda), purified
EVGP17-R-10	Recombinant (sf9) Zaire-Ebola virus glycoprotein (minus transmembrane domain, his-tag, 68 kda), purified
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,
EVP401-C	Rec. Zaire-Ebola virus VP40 protein control for Western
EVP405-R-10	Rec. (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,
EVNP11-S	140927A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A ;

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