

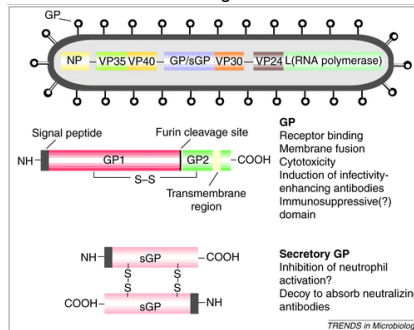
Product Specification Sheet

Recombinant Zaire-Ebola virus VP40

□ Cat # EVP406-R-10	Recombinant (E.coli) Zaire Ebola virus VP40 (H.sapiens-wt/GIN/2014/Kissidougou-C15, 1-326 aa, his-MBP tag, >95%)	SIZE: 10 ug
□ Cat # EVP406-R-100	Recombinant (E.coli) Zaire Ebola virus VP40 (H.sapiens-wt/GIN/2014/Kissidougou-C15, 1-326 aa, his-MBP tag, >95%)	SIZE: 100 ug
□ Cat # EVP406-BTN	Biotin-Recomb. (E.coli) Zaire Ebola virus VP40 (H.sapiens-wt/GIN/2014/Kissidougou-C15, 1-326 aa, his-MBP tag, >95%)	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 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

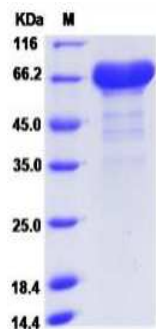


appear as the classic shepherd's crook or eyebolt. Ebola virions consist of 7 structural proteins. At the center is the helical **ribonucleocapsid**, which consists of the genomic RNA wrapped around a polymer of **nucleoproteins (NP)**. Associated with the ribonucleoprotein is the RNA-dependent **RNA 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, tag-free, purified Zaire Ebola virus VP40 (**cat#EVP406-R-10** GIN/2014/Kissidougou-C15, accession# AHX24648.1, 1-326aa) is expressed in E. coli with a N-terminal poly Histidine-tagged MBP tag (>95%, ~78 KDa). Purified protein is supplied in 50 mM Tris, 500 mM NaCl. (see lot sp. Conc. on the vial). Recombinant protein is suitable for ELISA, Western or other applications where purified protein is required. Do not freeze, thaw, or heat repeatedly.

Cat# EVP406-BTN, Biotin-conjugate

Purified protein was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC) at F/P ratio ~10:20:1. The protein is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide. Reconstitute powder in PBS to prepare stock solution (it

is also possible to dissolve the powder to make 1:10 diluted stock). Suggested conjugate dilutions are 1:1,000-1:3,000 ELISA, 1:5,00-1:2,000 for western; 1:500-1:2000 for IHC/IF.

User must test and optimize the dilution for a given application.

Storage

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

Long-term: at -80C 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 100-200 ng/well.
ELISA (50-100 ng antigen/well).

Specificity and cross reactivity:

Zaire ebola VP40 protein is significantly conserved in various serotypes: Bundibugyo (84%), Tai Forest (82%), Sudan (75%), Reston (74%). It is only 34% conserved in Marburg Ravn VP40. Recombinant proteins 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

EVP404-A	Goat Anti-Zaire-Ebola virus (Mayinga) VP40 (ZEBOV VP40) IgG, purified
EVP406-BTN	Biotin-Recombinant (E.coli) Zaire Ebola virus VP40 (H.sapiens-wt/GIN/2014/Kissidougou-C15, 1-326 aa, his-MBP tag, >95%)
EVP406-R-10	Recombinant (E.coli) Zaire Ebola virus VP40 (H.sapiens-wt/GIN/2014/Kissidougou-C15, 1-326 aa, his-MBP tag, >95%)
EVP407-M	Monoclonal Anti-Zaire-Ebola virus VP40 (ZEBOV VP40) IgG, aff pure
EVP408-M	Monoclonal Anti-Zaire-Ebola virus VP40 (ZEBOV VP40) IgG, aff pure
SVP407-R-10	Recombinant (E.coli) Sudan Ebola virus VP40 (Uganda,1-326aa, his tag, >95%)
SVP408-R-10	Recombinant (E.coli) Sudan Ebola virus VP40 (Uganda,1-326aa, his-MBP tag at NT, >95%)
AE-320700-1	Mouse Anti-Zaire Ebola virus VP40 IgG ELISA Kit, 96 tests, Quantitative
AE-320710-1	Mouse Anti-Zaire Ebola virus VP40 IgM ELISA Kit, 96 tests, Quantitative
AE-320720-1	Human Anti-Zaire Ebola virus VP40 IgG ELISA Kit, 96 tests, Quantitative
AE-320730-1	Human Anti-Zaire Ebola virus VP40 IgM ELISA Kit, 96 tests, Quantitative
AE-320760-1	Monkey/Chimp Anti-Zaire Ebola virus VP40 IgM ELISA Kit, 96 tests, Quantitative
EVP406-R-10	151022SV

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

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