ALPHA DIAGNOSTIC INTERNATIONAL

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Product Data Sheet

☐ Cat# ZENV11-S	Rabbit Anti-Zika Virus Envelop Protein (African, full length, >95%, his tag) antiserum	Size:100 ul
☐ Cat# ZENV11-C	Recombinant (E. coli) Zika Virus Envelop Protein (African) control for Western blot	Size:100 ul
☐ Cat# ZENV11-A	Rabbit Anti-Zika Virus Envelop Protein (African, full length, >95%, his tag) IgG, Aff pure	Size:100 ul

Zika virus (ZIKV) is a member of the virus family Flaviviridae and the genus Flavivirus (*flavus* means yellow), transmitted by daytime-active Aedes mosquitoes, such as A. aegypti and A. albopictus. Zika virus is related to the dengue, yellow fever, Japanese encephalitis, and West Nile viruses. Like other flaviviruses, Zika virus is enveloped and icosahedral and has a non-segmented, positive-sense ss-RNA genome. There are two lineages of the Zika virus: The African lineage, and the Asian lineage. Phylogenetic studies indicate that the virus spreading in the Americas is most closely related to the Asian strain. Effective **vaccines** for yellow fever virus, Japanese encephalitis, and tick-borne encephalitis have been develop but there are **no vaccines for Zika virus**.

Zika is causing an alarm because of its association with birth defects or microcephaly (small head or incomplete brain development) in newborn babies by mother-to-child transmission, as well as a stronger one with neurologic conditions in infected adults, including cases of Guillain–Barré syndrome (GBS CDC found Zika in the brains of two babies with microcephaly and evidence of Zika in two pregnancies that ended in miscarriage. CDC recently confirmed that Zika virus outbreak causes microcephaly in babies.

Source of Antigen and Antibodies

Antigen	A protein sequence corresponding to Zika virus envelope (Cote d'Ivoire)
Ab Host/type	Rabbit, Polyclonal antiserum (Cat# ZENV11-S). Supplied in 0.01% Sodium Azide as preservative. Rabbit, Polyclonal Antibody (Cat# ZENV11-A) purified by Protein A/G column supplied in 0.01% Sodium Azide as preservative.
2-Ab	Goat Anti-Rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates)
-ve control IgG	Cat# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Cat# ZENV11-C, positive control

Recombinant Zika virus envelope protein was expressed in E.coli cells as his-tag fusion protein (full length, >95%, ~34 KDa). Purified glycoprotein for Western blot +ve control (Cat# ZENV11-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # ZENV11-C for good visibility with antibody Cat # ZENV11-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 # ZENV11-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/ 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.

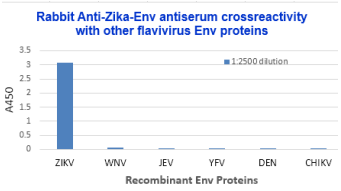
Recommended Usage

Western Blotting: Purified ZENV is ~34 KDa. Load ~100-200 ng/lane for good visibility with appropriate antibodies (ZENV11-S, 1:500-2500).

ELISA (1:1-5K; using 50-100 ng antigen/well).

Histochemistry & Immunofluorescence: not tested.

Fig. Rabbit Anti-Zika Env antiserum (#ZENV11-S) was tested for cross-reactivity by ELISA using Env protein coated plate from the indicated flavivirures at 1:2500 dilution. The antiserum did not have appreciable reactivity with non-Zika Env proteins.



Specificity & Cross-reactivity

Zika virus Envelop sequence share 53-67% similarity with Spondweni virus, kedougou virus and Kokobera virus; 50% similarity with Dengue virus, Japanese encephalitis virus, West Nile virus. Zika virus African strain and Brazilian strains are 99% conserved. Recombinant purified Zika Env proteins (E. coli, Sf9, and HEK) are available to be used as positive controls. Monoclonal Zika Anti-Env antibodies ZENS112-M and ZEVS113-M are also specific for Zika Env proteins.

References: Malone, RW et al., PLOS Neglected Tropical Diseases 2016; 10 (3): e0004530; Sikka, V; et al., Journal of Global Infectious Diseases., 2016., 8 (1): 3–15; Petersen, EE., MMWR. Morbidity and mortality weekly report., 2016., 65 (12): 315–22.

*This product is for In vitro research use only.

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

Catalog#	Prod Description
RV-403100-1	Human Anti-ZIKAV-Envprotein IgG ELISA kit
RV-403105-1	Human Anti-ZIKAV-Envprotein IgM ELISA kit
RV-403110-1	Monkey Anti-ZIKAV-Envprotein IgG ELISA kit
RV-403115-1	Monkey Anti-ZIKAV-Envprotein IgM ELISA kit
RV-403120-1	Mouse Anti-ZIKAV-Envprotein IgG ELISA kit
RV-403125-1	Mouse Anti-ZIKAV-Envprotein IgM ELISA kit
RV-403200-1	Human Anti-Zika Virus (ZIKV) PrM protein IgG ELISA kit
RV-403205-1	Human Anti-Zika Virus (ZIKV) PrM protein IgM ELISA kit
RV-403210-1	Monkey Anti-Zika Virus (ZIKV) PrM protein IgG ELISA kit
RV-403215-1	Monkey Anti-Zika Virus (ZIKV) PrM protein IgM ELISA kit
RV-403220-1	Mouse Anti-Zika Virus (ZIKV) PrM protein IgG ELISA kit
ZENV12-M	Monoclonal Purified Anti-Zika Virus Envelope Protein (African) IgG1 Clone #1
ZENV13-M	Monoclonal Purified Anti-Zika Virus Envelope Protein (African) IgG1 Clone #2
ZENV15-R-10	Recombinant (E. coli) Zika Virus Envelop Protein (African, full length, 3-254 aa, >95%, his tag) for ELISA
ZENV15-R-100	Recombinant (E. coli) Zika Virus Envelop Protein (African, full length, 3-254 aa, >95%, his tag) for ELISA
ZNS112-M	Monoclonal Purified Anti-Zika Virus NS1 Protein (African) IgG1 Clone #1
ZNS113-M	Monoclonal Purified Anti-Zika Virus NS1 Protein (African) IgG2a Clone #2

ZENV11-S-Rabbit-anti-Zika-Envelop-Antiserum 160509A

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