

Product Data Sheet

<input type="checkbox"/> Cat# ZENV12-M	Monoclonal Purified Anti-Zika Virus Envelope Protein (African) IgG Clone #1	Size:100 ul
<input type="checkbox"/> Cat# ZENV11-C	Recombinant Zika Envelope Protein (African) control for Western	Size:100 ul
<input type="checkbox"/> Cat# ZENV12-BTN	Monoclonal Purified Anti-Zika Virus Envelope Protein (African) IgG-Biotinylated	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 developed 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	Recombinant (sf9) Zika Virus Envelope protein (African)
Ab Host/type	Mouse monoclonal IgG1 clone 1 (Cat# ZENV12-M) purified by Protein A/G columns
2-Ab	Goat Anti-Mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Aff pure IgG

100 ul solution lyophilized powder

Buffer: PBS+0.05% azide Reconstitute powder 100 ul of PBS.

Storage

Short-term: unopened, undiluted vials for 1-2 week sat 4oC.

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

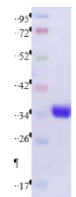
Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Cat# ZENV12-BTN, Biotin-conjugate

Purified antibody was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC) at F/P ratio ~10-20:1. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide (~0.5 mg/ml). Store at 4oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:5,000-1:30,000 ELISA, 1:1K-1:5 for western.



Cat# ZENV11-C, Western blot positive control

Recombinant Zika virus (African) envelope protein was expressed in *E.coli* cells as his-tag fusion protein (full length, >95%, ~28.3 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 # ZENV12-M. 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.

Recommended Usage

Western Blotting: Users must optimize antibody dilution depending upon the nature of samples and other technical conditions. Good detection when using antibody at 0.5 µg/mL.

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

Histochemistry & Immunofluorescence: not tested.

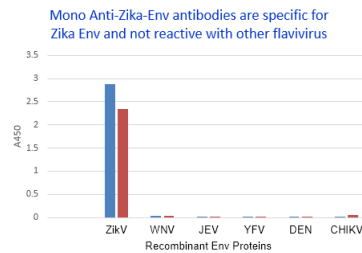


Fig. Zika Env antibodies (#ZENV112-M and ZENV113-M) were tested for cross-reactivity by ELISA using Env protein coated plate from the indicated flaviviruses at 1:1000 dilutions. The two Zika antibodies did not have appreciable reactivity with non-Zika Env proteins.

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 ZENV112-M and ZENV113-M are specific for Zika Env proteins. Antibody # ZENV12-M also reacts with Zika Env-DIII.

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

Recombinant Zika Env, NS1, prM, capid, AXL, GAS6 proteins and antibodies also available.

ZENV12-M-Mono-anti-Zika-Env-IgG

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