

**Product Data Sheet**

- |                                        |                                                                                 |             |
|----------------------------------------|---------------------------------------------------------------------------------|-------------|
| <input type="checkbox"/> Cat# ZNS111-S | Rabbit Anti-Zika Virus (E. coli) NS1 Protein (African, full length) antiserum   | Size:100 ul |
| <input type="checkbox"/> Cat# ZNS111-C | Recombinant (E. coli) Zika Virus NS1 Protein (African) control for Western blot | 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**

<b>Antigen</b>	Recombinant Zika NS1 protein (African)
<b>Ab Host/type</b>	Rabbit, Polyclonal antiserum (Cat# ZNS111-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# ZNS111-C, positive control**

Recombinant Zika virus envelope protein was expressed in E.coli cells as his-tag fusion protein (full length, >95%, ~42 KDa). Purified glycoprotein for Western blot +ve control (Cat# ZNS111-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # ZNS111-C for good visibility with antibody Cat # ZNS111-S. Store at -20°C 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 # ZNS111-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**

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

**Storage**  
**Short-term:** unopened, undiluted vials for 1-2 weeks 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:** Purified ZNS1 is ~42 KDa. Load ~100-200 ng/lane for good visibility with appropriate antibodies.

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

Use ADI #ZNS115-R-10.

**Histochemistry & Immunofluorescence:** not tested.

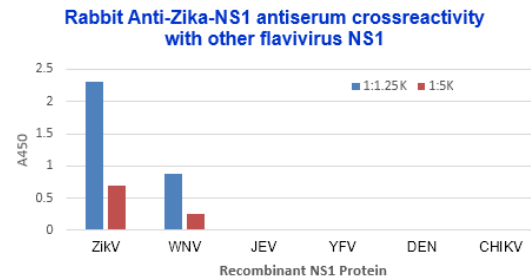


Fig. Rabbit anti-Zika NS1 antiserum (#ZNS11-S) was tested for cross-reactivity by ELISA using NS1 protein coated plate from the indicated flaviviruses at 1:1.25K and 1:5K dilutions. The antibodies show some reactivity with WNV-NS1 but it was significantly reduced at 1:5K dilution. The antibody was non-reactive to other flaviviruses.

**Specificity & Cross-reactivity**

Zika virus NS1 sequence share 74% similarity with Spondweni virus; 59% with Torres virus; 57-58% with Kedougou virus and Naranjal virus; 50-56% with dengue virus. Zika virus African strain and Brazilian strains are 99% conserved. Recombinant purified Zika NS1 proteins (E. coli, Sf9, and HEK) are available to be used as positive controls. Monoclonal Zika Anti-NS1 antibodies ZNS112-M and ZNS113-M are specific for Zika NS1 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\\_A\\_Flr.pdf](http://www.4adi.com/objects/catalog/product/extras/Ebola_Marburg_Vaccines_ELISA_A_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

ZNS111-S-Rabbit-anti-Zika-NS1-antiserum

160509SV

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