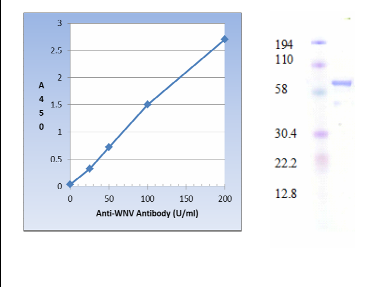


**Mouse Anti-West Nile Virus mosaic protein (Capsid+Envelop+prM) IgG-specific ELISA Kit, Cat # 910-210-WNG**  
**Mouse Anti-West Nile Virus mosaic protein (Capsid+Envelop+prM) IgM-specific ELISA Kit, Cat # 910-220-WNM**

ADI's WNV ELISAs utilizes highly purified recombinant **WNV virus mosaic protein (Capsid+prM+E)** as the coated antigen to capture IgG/IgM-specific anti-WNV IgG or IgM. This kit **detects and measures the presence of antibodies against capsid, prM or Envelop protein** in a single test. ADI has other kits to detect antibodies to the capsid protein or prM protein or E protein. These ELISA kits are designed to research the efficacy of various vaccines in naïve or vaccinated mice.



**Mouse Anti-WNV (C+prM+E) IgG/IgM-specific ELISA Kit Features**

- Highly purified recombinant WNV mosaic protein (C+prM+E)-coated, 96-well strip plate
- Convenient anti-WNV (mosaic protein) IgG-specific calibrators (0-200 u/ml)
- 100ul samples (diluted 1:101 or more) serum or plasma
- 3 incubation steps at room temp (110 min assay).
- The kits contain all reagents and buffers necessary for the test. Shelf life 6-months.
- Inset: Gel image of the recombinant purified mosaic protein (~74 Kda)

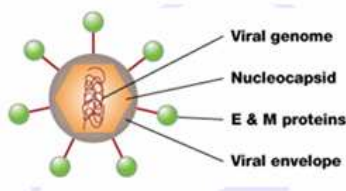
This brochure highlights the most important information about the kit design and a detailed manual will be supplied with the kit. For in vitro research use only.

**Assay Procedure:** Allow all reagents to reach room temperature. Arrange and label required number of strips.

- Step 1.** Pipet **100 ul each of supplied pre-diluted stds**, and samples (diluted 1:100 or more) into wells. Mix and incubate at RT for **60 min**.
- Step 2.** **Aspirate and wash** the plate 4X. Add **100 ul of Anti-IgG or IgM-HRP** Conj to all wells, mix gently and incubate at room temp. for **30 min**.
- Step 3.** **Aspirate and wash** the plate 5X. Add **100 ul of TMB Substrate** soln. to all wells, mix gently, and incubate at room temp for **20 min**.
- Step 4** Pipet **100 ul of stop solution** into each well and mix gently (blue color turns yellow). **Measure OD at A450 nm**. Determine the presence of antibody (IgG or IgM) by comparing with the supplied standards.

**Specificity:** This kit is designed to detect only the IgG-type antibodies to WNV proteins to Capsid, Envelop or prM proteins. It will not detect antibodies to other WNV proteins.

**General Information**



West Nile virus (WNV) is a mosquito-borne zoonotic arbovirus belonging to the Flaviviridae family. This flavivirus is found in temperate and tropical regions of the world. It was first identified in the West Nile subregion in 1937. WNV is now considered to be an endemic pathogen in Africa, Asia, Australia, the Middle East, and Europe and in the United States. Preliminary diagnosis is often based on the patient's clinical symptoms, places and dates of travel. Definitive diagnosis of WNV is obtained through detection of virus-specific antibody Immunoglobulin M (IgM/IgG) antibodies by ELISA. WNV causes a neurological disease called West Nile encephalitis or inflammation of the brain. The genetic material of WNV is a positive-sense, ssRNA, which encode seven nonstructural proteins and three structural proteins. The RNA strand is held within a nucleocapsid formed from 12-kDa protein blocks; the capsid is contained within a

host-derived membrane altered by two viral glycoproteins. The envelope contains two proteins: the protein M and glycoprotein E. The nucleocapsid is a complex of protein C and mRNA. In immature particles, there are 60 icosadially organized trimeric spikes on the surface. Each spike consists of three heterodimers of envelope protein M precursor (prM) and envelope protein E. Inside cells, viral particles will contain a prM particle and E in a complex that matures through proteolytic cleavage and processing in the Golgi apparatus. Experimentation in animals suggested that capsid, Envelop proteins, and prM proteins are antigenic and may afford immunity against the WNV.

Currently, **no vaccine against WNV** infection is available for humans. There are some vaccines available for veterinary use. A vaccine for horses (ATCvet code: QI05AA10) based on killed viruses exists; some zoos have given this vaccine to their birds, although its effectiveness is unknown. Some **animal vaccines** use inactivated WNV (K-WN/WNV-Innovator, Fort Dodge; Pfizer) alone or in combination with Tetanus or encephalitis. Equine Recombitek rWNV vaccine (Merial) consists of a canarypox virus vector with insertion and expression of the membrane (prM) and envelope (E) proteins of WNV. The latest equine vaccine approved in 2006 is a single-dose, attenuated West Nile virus, live flavivirus chimera vaccine (WN-FV) (PreveNile; Intervet, De Soto,KS) for horses and is marketed without an adjuvant. The **recombinant chimera expresses the E and prM proteins** of WNV in a yellow fever vector (YF17D). The vaccine has been labeled for use in horses for the prevention of West Nile virus viremia and as an aid in the prevention of WNV disease and encephalitis. Typically, efficacy of the vaccine has been followed by the protection of the horses or other animals from live virus challenge. In some studies the antibody neutralization tests were performed but no specific antibodies tests (ELISA) were performed to measure the antibody titer to the Envelop or the prM-proteins. ADI's WNV ELISAs utilizes highly purified recombinant WNV virus proteins as the coated antigen to capture IgG/IgM-specific anti-WNV. These ELISA kits are designed to research the efficacy of various vaccines in naïve and vaccinated animals and humans.

**WNV Related ELISA kits**

Items Description	Species	Antibody Type IgG Cat#	Antibody Type IgM Cat#
West Nile Virus Mosaic Proteins Vaccine (Capsid+prM+Envelop) Antibody ELISA kits	Mouse	910-210-WNG	540-110-DHM
	Horse	910-310-WNG	910-320-WNG
	Human	910-410-WNG	910-420-WNG
West Nile Virus prM Vaccine Antibody ELISA kits	Mouse	910-230-WNG	910-240-WNG
	Horse	910-330-WNG	910-340-WNG
	Human	910-430-WNG	910-440-WNG
West Nile Virus Envelop Vaccine Antibody ELISA kits	Mouse	910-250-WNG	910-260-WNG
	Horse	910-450-WNG	910-460-WNG
	Human	910-430-WNG	910-440-WNG

910-210-WNG-flr Rev. 121111A

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