ALPHA DIAGNOSTIC INTERNATIONAL

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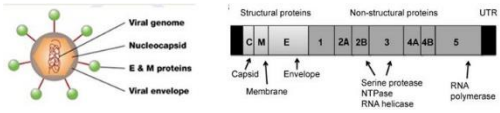
Product Data Sheet

Cat # WNVE15-R-50 Recombinant (E. coli) West Nile Virus Envelop (WNV-E) protein (>95%, ~42 Kda, His-tag) **Size**:50 ug

West Nile virus (WNV) is a mosquito-borne zoonotic **arbovirus** belonging to the genus Flavivirus 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, Europe and in the United States. The main mode of WNV transmission is via various species of **mosquitoes** which are the prime vector, with **birds** being the most commonly infected animal and serving as the **prime reservoir** host - especially passerines which are of the largest order (Passeriformes) of birds. Symptoms may include fever, headaches, fatigue, muscle pain or aches, malaise, nausea, anorexia, vomiting, myalgias and rash.



The genetic material of WNV is a positive-sense, ssRNA (11-12Kb); these genes encodes 7 nonstructural proteins (**NS1-5**) and three structural proteins (**C, M, E**). 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. WNV infections produces antibodies to both SPs and NSPs of WNV. Preliminary **diagnosis** is often based on the patient's clinical symptoms, places and dates of travel, activities, and epidemiologic history of the location where infection occurred. Definitive diagnosis of WNV is obtained through detection of WNV-specific antibodies (IgM/IgG) by ELISA and PCR.

WNV Vaccine: Currently, **no vaccine** against WNV infection is available for humans. There are some vaccines available for veterinary use. 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 is an attenuated **WNV-flavivirus chimera vaccine (WN-FV)** (PreveNile; Intervet) for horses. The vaccine expresses the **E and prM proteins** of WNV in a yellow fever vector (YF17D). **DIVA Tests**: The presence NS1 antibodies may serve to distinguish vaccinated from naturally infected animals or humans.

Source and Forms of Protein

West Nile virus Envelop protein was expressed in E. coli as his-tag fusion protein (full length, >95%, ~42 KDa). Purified protein is supplied in PBS azide (or see lot sp. Conc. on the vial, typically 10 ug/20 ul).

Store at –20ºC in suitable size aliquots. SDS may crystallize in cold conditions. It should re-dissolve by warming before taking it from the stock. This preparation is not biologically active. It is suitable for ELISA as coating antigen or western blot +ve control. Do not freeze, thaw, or heat repeatedly.

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 WNV is ~42 KDa. Load ~100-200 ng/lane for good visibility with appropriate antibodies.

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

Specificity & Cross-reactivity: West Nile Virus (WNV) Envelope Protein. When tested by IFA, also reacts with SLE. Does not cross-react with JEV, YFV, DEN, TBE, EEE, WEE, POW, LAC and VEE.

References: Steinman, A et al (2003). Emerging Infectious Diseases 9 (7): 887–889; Klenk, K et al (2004). Emerging Infectious Diseases 10 (12): 2150–2155; Nash D, et al. (June 2001. N. Engl. J. Med. 344 (24): 1807–14.

*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
WNV11-M	Monoclonal anti-West Nile Virus (WNV) envelop protein IgG (non-reactive with Dengue, SLE, JEV)
WNV11-S	Anti-West Nile Virus (WNV vaccine/Innovator, inactivated) antiserum
WNV11-S	Anti-West Nile Virus (WNV) vaccine (innovator) antiserum
WNV12-M	Monoclonal anti-West Nile Virus (WNV) envelop protein IgG #2 (crossreacts with Dengues, SLE, JEV)
WNV12-S	Anti-West Nile Virus (WNV vaccine/Innovator, inactivated) antiserum
WNV13-S	Anti-West Nile Virus vaccine (WNV, Recombitek/DNA vaccine) antiserum
WNV15-R-10	Recombinant (E. coli) West Nile Virus (WNV) chimeric protein (Capsid+prM+Env, ~70 Kda, His-tag)
WNV15-S	Anti-West Nile Virus (WNV) chimeric protein (Capsid+prM+Env, ~70 Kda, His-tag) antiserum
WNV16-S	Anti-West Nile Virus (WNV) envelop protein antiserum
WNV17-S	Anti-West Nile Virus NS1 (WNV-NS1, US strain) protein antiserum
WNV18-S	Anti-West Nile Virus prm (WNV-prM) protein antiserum
WNVE15-R-50	Recombinant (E. coli) West Nile Virus Envelop (WNV-E) protein (>95%, ~42 Kda, His-tag)
WNVE16-R-50	Recombinant (HEK) West Nile Virus Envelop (WNV-E, domain III) protein (>95%, ~12 Kda, His-tag)
WNVE17-R-50	Recombinant (yeast) West Nile Virus Envelop (WNV-E, domain III, lineage 2) protein (>95%, ~12 Kda, His-tag)
WNVE19-S	Anti-West Nile Virus Env-DIII protein antiserum
WNVN20-M	Mouse Monoclonal Anti-West Nile Virus NS1 (WNV-NS1) IgG
WNVNS17-R-10	Recombinant (E. coli) West Nile Virus NS1 (WNV-NS1) protein (USA, >95%, ~41 Kda, His-tag)
WNVNS21-R-50	Recombinant (HEK) West Nile Virus NS1 (WNV-NS1) protein (>95%, ~50 Kda, His-tag)
WNVP18-R-50	Recombinant (E. coli) West Nile Virus prM (WNV-prm) protein (>95%, ~20 Kda, His-tag)
WNVP21-S	Anti-West Nile Virus prM (WNV-prM) antiserum910-310-WNG Horse Anti-West Nile Virus Mosaic Proteins (WNV C+prM+E) IgG ELISA kit, 96 tests, quantitative
910-370-WNG	Human Anti-West Nile Virus prM Protein (WNV-prM) IgG ELISA kit, 96 tests, Quantitative
910-375-WNM	Human Anti-West Nile Virus prM Protein (WNV-prM) IgM ELISA kit, 96 tests, Quantitative
910-380-WNG	Human Anti-West Nile Virus Envelop Protein (WNV-E) IgG ELISA kit, 96 tests, Quantitative

WNVE15-R-50-Westnile-Env 160715SV

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