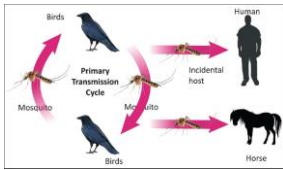
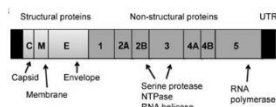
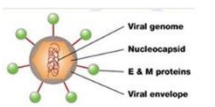


## West Nile Virus (WNV) Vaccines: Antibody ELISA Kits, Recombinant Proteins, Peptides and Antibodies



**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-WNV/**WNV-Innovator**, Fort Dodge; Pfizer) alone or in combination with Tetanus or encephalitis. **Equine Recombitek rWNV vaccine** (Meriel) 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.

**About ADI's WNV ELISA Kits-**ADI has developed WNV antibody (prM, NS1 and Env) ELISA kits to determine the efficacy of WNV vaccines and to screen birds, animals or humans for WNV infections (NS1 antibody). Recombinant proteins and antibodies to WNV are also available to facilitate research on WNV vaccine. ADI ELISA kits are rapid (105 min assay at room temp), sensitive (~ <1 ng/ml IgG or IgM), and quantitative. The use of highly purified recombinant proteins also allows the test to be more specific for WNV than similar kits using the whole viral proteins.

### West Nile Virus Related ELISA kits

Vaccines	Target Antigens	ELISA Type	Ab Type	Human	Mouse	Monkey	Others
West Nile Virus (WNV)	Whole viral antigens	Ab	IgG	910-300-WNG	910-200-WNG	910-400-WNG	910-570-WNG (bird)
			IgM	910-305-WNM	910-205-WNM	910-405-WNM	910-505-WNM (bird)
	prM	Ab	IgG	910-370-WNG	910-270-WNG	910-470-WNG	910-570-WNG (bird)
			IgM	910-375-WNM	910-275-WNM	910-475-WNM	910-575-WNM (bird)
	Envelop	Ab	IgG	910-380-WNG	910-280-WNG	910-480-WNG	910-580-WNG (bird)
			IgM	910-385-WNM	910-285-WNM	910-485-WNM	910-585-WNM (bird)
	NS1	Ab	IgG	910-390-WNG	910-290-WNG	910-490-WNG	910-590-WNG (bird)
			IgM	910-395-WNM	910-295-WNM	910-495-WNM	910-595-WNM (bird)

### West Nile Virus Recombinant Proteins & Antibodies

	Catalog#	Product Description	Product Type
<b>WNV Vaccine</b>	WNV11-S	Rabbit Anti-WNV vaccine (innovator) antiserum	Antiserum
	WNV12-S	Rabbit Anti-WNV vaccine/Innovator, inactivated) antiserum	Antiserum
	WNV13-S	Rabbit Anti-WNV, Recombitek/DNA vaccine) antiserum	Antiserum
<b>WNV-Env</b>	WNV11-M	Monoclonal anti-WNV envelop protein IgG (non-reactive with Dengue, SLE, JEV)	Antibodies
	WNV12-M	Monoclonal anti-WNV envelop protein IgG #2 (crossreacts with Dengue, SLE, JEV)	Antibodies
	WNV15-S	Rabbit Anti-WNV chimeric protein (C+prM+E) antiserum	Antibodies
	WNV16-S	Rabbit Anti-WNV envelop protein antiserum	Antiserum
	WNVE19-S	Rabbit Anti-WNV Env-DIII protein antiserum	Antiserum
	WNVE15-R-50	Recomb. (E. coli) WNV-Env protein (>95%, ~42 Kda, His-tag)	Rec. Protein
	WNVE16-R-50	Recomb. (HEK) WNV-E, domain III protein (>95%, ~12 Kda, His-tag)	Rec. Protein
<b>WNV-prM</b>	WNV17-R-50	Recomb. (yeast) WNV-E, domain III, lineage 2) protein (>95%, ~12 Kda, His-tag)	Rec. Protein
	WNV18-S	Rabbit Anti-WNV prM protein antiserum	Antiserum
	WNV21-S	Rabbit Anti-WNV prM antiserum	Antiserum
<b>WNV-NS1</b>	WNV18-R-50	Recomb. (E. coli) WNV prM protein (>95%, ~20 Kda, His-tag)	Rec. Protein
	WNV17-S	Rabbit Anti-WNV NS1 (WNV-NS1, US strain) protein antiserum	Antiserum
	WNV20-M	Mouse Monoclonal Anti-WNV NS1 (WNV-NS1) IgG	Antibodies
	WNV15-R-10	Recombinant (E. coli) WNV chimeric protein (Capsid+prM+Env, ~70 Kda, His-tag)	Rec. Protein
	WNVNS17-R-10	Recombinant (E. coli) WNV NS1 protein (USA, >95%, ~41 Kda, His-tag)	Rec. Protein
WNVNS21-R-50	Recombinant (HEK) WNV NS1 protein (>95%, ~50 Kda, His-tag)	Rec. Protein	

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