West Nile Virus, TX 4090 (D1660)

Catalog No. NR-49790

For research use only. Not for human use.

Contributor:
World Reference Center for Emerging Viruses and Arboviruses, University of Texas Medical Branch, Galveston, Texas, USA

Manufacturer:
BEI Resources

Product Description:
Virus Classification: Flavivirus, Flaviviridae
Species: West Nile Virus
Strain/Isolate: TX 4090 (D1660)
Original Source: West Nile virus (WNV), TX 4090 (D1660) was isolated from an American crow (Corvus brachyrhynchos) collected in Spring, Harris County, Texas, USA on November 7, 2004 and contributed to WRCEVA by the Harris County Mosquito Control Division, Houston, Texas, USA.¹

WNV is an arthropod-borne virus which circulates in natural transmission cycles between primarily mosquitoes (Culex species) and birds,² with humans as incidental hosts. The virus is indigenous to Africa, Asia, Australia, and Europe, and has recently caused large epidemics in Romania, Russia, and Israel. WNV was recently introduced to North America, where it was first detected in 1999 during an epidemic of meningoencephalitis in New York City.³ It caused one of the worst epidemics in North America in 2012 in Texas in which 1,868 cases were reported and 89 people died.⁴ Most human WNV infections are asymptomatic but clinical infections can range in severity from uncomplicated West Nile fever to fatal meningoencephalitis; the incidence of severe neuroinvasive disease and death increase with age.⁵ There is no established WNV-specific treatment or licensed vaccine for humans currently available.⁶ Prevention depends on organized, sustained vector mosquito control and public education.⁷

Material Provided:
Each vial contains approximately 1 mL of cell lysate and supernatant from Cercopithecus aethiops kidney epithelial cells (Vero; ATCC® CCL-81™) infected with WNV, TX 4090 (D1660).

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-49790 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Host: Cercopithecus aethiops kidney epithelial cells (Vero; ATCC® CCL-81™)
Growth Medium: Eagle’s Minimum Essential Medium containing Earle’s Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate and 1.5 g/L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent
Infection: Cells should be 70% to 90% confluent
Incubation: 5 to 8 days at 37°C and 5% CO₂
Cytopathic Effect: Cell rounding and detachment

Citation:
Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH, as part of the WRCEVA program: West Nile Virus, TX 4090 (D1660), NR-49790.”

Biosafety Level: 3

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References:
1. Tesh, R. B., Personal Communication.

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