AnaSpec is pleased to introduce the industry's first commercially available assay kits for the detection of WNV protease NS3 inhibitors – the SensoLyte® series of WNV Protease Assay Kits.

West Nile virus (WNV), from the family Flaviviridae,[1] was first identified in the West Nile district of Uganda in 1937.[2] WNV outbreaks have been reported in Israel in the 50's, France in the 60's and South Africa in the 70's.[3] In 1999, the first documented WNV infection in the US was reported in New York.[4] The main route of human infection is through infected mosquito bites. WNV infection can cause severe neurological disease and fatalities in both human and animal hosts.

- ✓ Industry's First & Only
- ✓ Fluorogenic
- ✓ Sensitive
- ✓ Homogeneous
- ✓ Ideal for HTS of WNV Protease Inhibitor

WNV contains a single-stranded, positive-sense RNA genome, which encodes three structural proteins (capsid (C), membrane (M), envelope (E)), and seven non-structural proteins (NS1, NS2A, NS2B, NS3, NS4A, NS4B, NS5).5, 6 NS3 protease is essential (along with viral-encoded cofactor NS2B) for post-translational processing of a viral polypeptide precursor in infected host cells. This polypeptide provides the structural and functional viral proteins. Inhibition of its processing could represent a potential treatment for viral infections. With no effective vaccine or antiviral drug to protect against WNV infection,[7] this protease represents a potentially key target for developing anti-WNV drugs.[8, 9]

SensoLyte® West Nile Virus Protease Assay Kits provide a convenient, homogeneous assay for high throughput screening of West Nile Virus protease NS3 inhibitors. Utilizing a fluorogenic peptide (SensoLyte® 440 West Nile Virus Protease Assay Kit) or a FRET peptide (SensoLyte® 570 West Nile Virus Protease Assay Kit), these assays provide continuous quantification of protease activity.[10] Upon NS3 protease cleavage, the fluorescence of AMC in the former and 5-TAMRA in the latter is recovered. Their fluorescence can be monitored at their characteristic emission wavelength.

SensoLyte® West Nile Virus Protease Assay Kits:
SensoLyte® 440 West Nile Virus Protease Assay Kit (Ex/Em=354/442 nm), Cat# 72079
SensoLyte® 570 West Nile Virus Protease Assay Kit (Ex/Em=540/575 nm), Cat# 72080

Related Product:
WNV NS3 Protease, recombinant, Cat# 72081

1. Prepare working solutions:
   - Fluorogenic substrate (Component A)
   - WNV protease (not provided)
   - WNV inhibitor (Component D)
2. Set up enzymatic reaction (protease+ inhibitor, controls), 37C for 10 min.
3. Add diluted fluorogenic substrate, mix and start reading fluorescence signal (kinetic or end-point).

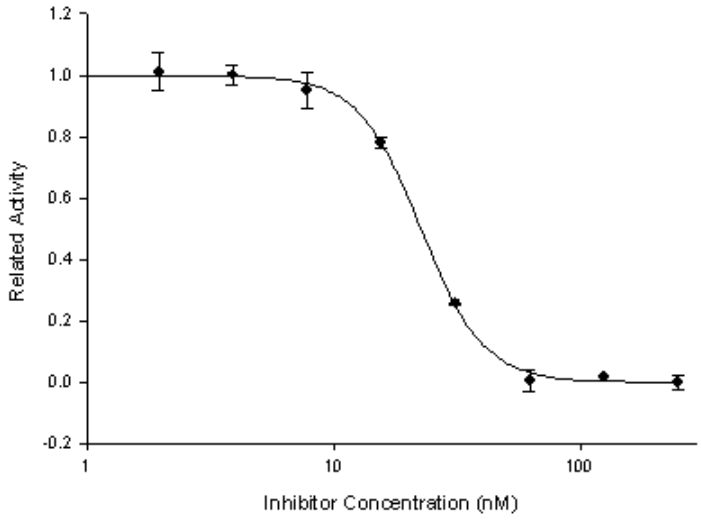

Figure 1. Inhibition of WNV by protease inhibitor, undeca-D-Arg-NH_2 using the SensoLyte® 440 WNV Protease Assay Kit, Cat# 72079.

Related Products: *Dengue Viral peptides*- contact service@anaspec.com

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