

Antibody Datasheet

Product Name:	Mouse anti Powassan Virus NS1 protein
Clone number:	M837
Isotype:	Mouse IgG2a
Product code:	MAB12294
Batch Number:	
Amount:	0.1 mg
Concentration:	1 mg/ml
Buffer:	Phosphate Buffered Saline pH7.2
Preservative:	0.05% Sodium Azide (NaN ₃)
Specificity:	This antibody recognises Powassan Virus (PV) NS1 protein. In ELISA assays, the antibody cross reacts with Tick-borne Encephalitis virus (TBEV) NS1 but does not cross react with other flavivirus NS1 proteins tested including Yellow Fever Virus (YFV), Japanese Encephalitis Virus (JEV), Zika virus or DENV (a mix of DENV1, DENV2, DENV3, DENV4).
Applications:	ELISA
Secondary reagents:	Goat anti mouse IgG:HRP (PAB21441HRP)
Antigen background:	Powassan virus (POWV) is a positive-sense single-stranded RNA virus that belongs to the genus <i>Flavivirus</i> , a member of the <i>Flaviviridae</i> family of viruses. It is an arthropod-borne virus that is transmitted by infected ticks to small/medium sized mammals, which act as reservoirs for the virus. Different tick species transmit POWV including hard ticks, of the family <i>Ixodidae</i> , and the tick species varies according to the geographical region. POWV can also be transmitted to humans, which are incidental, dead-end, hosts for the virus (Hermance ME, et al).



POWV is classified as a member of the tick-borne encephalitis sero-complex of flaviviruses. Two genotypes, or lineages, of PV have been identified in Russia and the Western hemisphere. POWV is assigned to lineage I and Deer tick virus (DTV) to lineage II. Serologically the two viruses are indistinguishable but have some phylogenetic differences. Both lineages have been linked to human disease.

First recognised as a human pathogen in 1958, PV is the cause of a rare neuro-invasive disease. In many cases, individuals remain asymptomatic or may present with a febrile illness with mild fever, sore throat, headache, drowsiness and disorientation. Some patients develop neurological complications, which include encephalitis, aseptic meningitis and meningoencephalitis. Reports suggest that 10% of POWV cases are fatal and 50% of survivors develop long-term neurological problems, which include acute headaches, muscle wasting and memory problems ([CDC](#)).

References:

Hermance ME and Thangamani S. (2017). Powassan Virus: An Emerging Arbovirus of Public Health Concern in North America. Vector Borne Zoonotic Dis. 1; 17(7): 453–462.

Center for Disease Control and Prevention: Powassan virus

Storage:

Store at +4°C for up to three months, or at -20°C for longer.

The Antibody is shipped at ambient temperature.
Avoid repeated freeze/thaw cycles.

