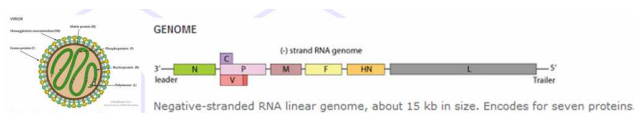


Product Specification Sheet

Mouse Pneumonia Virus (PVM) Antibodies and Controls

<input type="checkbox"/> Cat # PVMNP14-S	Rabbit Anti- Mouse Pneumonia Virus nucleoprotein (PVM-NP) antiserum	SIZE: 100 ul
<input type="checkbox"/> Cat # PVMNP14-C	Recombinant Mouse PVM-NP WB positive control	SIZE: 100 ul

Animals, just like humans, are susceptible to various bacterial and viral infections. Animals are used widely in biomedical research. Laboratory animal infections may compromise the health of the animals and ultimately the research data derived from them. Microbial infections alter not only the animal behavior but also the biological responses. Apart from the use of whole animals for experimentations, numerous animal cell lines and proteins are also derived from animals and used in biomedical research. So there is great potential for the diseases to spread very quickly.



Paramyxoviruses are viruses of the Paramyxoviridae family of the Mononegavirales order; they are negative-sense single-stranded RNA viruses responsible for a number of human and animal diseases. Virions are enveloped and can be spherical, filamentous or pleomorphic. Fusion proteins and attachment proteins appear as spikes on the virion surface. Matrix proteins inside the envelope stabilize virus structure. The nucleocapsid core is composed of the genomic RNA, nucleocapsid proteins, phosphoproteins and polymerase proteins. The gene sequence is:

A number of important human diseases are caused by paramyxoviruses. These include mumps, measles, and respiratory syncytial virus (RSV), which is the major cause of bronchiolitis and pneumonia in infants and children. Paramyxoviruses are also responsible for a range of diseases in other animal species, for example canine distemper virus (dogs), phocine distemper virus (seals), cetacean morbillivirus (dolphins and porpoises), Newcastle disease virus (birds), and rinderpest virus (cattle). **Pneumonia virus of mice (PVM)** is a member of the subfamily Pneumovirinae and is the closest known relative of respiratory syncytial virus. Both viruses cause pneumonia in their respective hosts. Serological evidence revealed that PVM is prevalent among many species of laboratory rodents, in which it causes a latent or inapparent infection. There is serologic evidence suggesting widespread exposure of humans to PVM. The degree of amino acid sequence identity between PVM and RSV ranges from 10% (M2-2 protein) to 60% (nucleocapsid N protein). The pathogenesis of PVM in inbred mice varies considerably between strains; in the commonly used BALB/c strain, the virus is highly pathogenic. There has been serologic evidence of infection of a number of other laboratory animals, including other rodent species, rabbits, and nonhuman primates.

Source of Antigen and Antibodies

Antigen	Recombinant purified full length PVM-NP protein
Ab Host/type	Rabbit, Polyclonal antiserum (Cat # PVMNP14-S) supplied in 0.05% azide as preservative.
2-Ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

PVM-NP was expressed in E. Coli as his-tag fusion protein (protein PVM15 strain, full length, purity >95%, ~44 KDa). Purified PVM-NP protein for Western blot +ve control (**Cat # PVMNP14-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # **PVMNP14-C** for good visibility with antibody at # **PVMNP14-S**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per

10 ul of the # **PVMNP14-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Antiserum

- 100 ul solution lyophilized powder

Buffer: PBS+0.05% azide

Reconstitute powder 100 ul of PBS.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C 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: An initial dilution of 1:500-2K is recommended for Western. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions.

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

Histochemistry & Immunofluorescence: not tested.

Specificity & Cross-reactivity

PVM-NP (PVM15 strain) J3666 strain NPs are 99% identical. It is highly conserved (98%) in dog pneumonia virus. PVM-NP is conserved 61% in human and bovine Respiratory syncytia virus (RSV) and only 45% in human and metapneumoniaviruses. Therefore, anti-PVM-NP virus (#PVMNP14-S) may potentially crossreacts with NPs of these related viruses. Recombinant protein of PVM (#PVMNP15-R) is available for control studies.

References: Barr J (1991) J. Gen. Virol. 72, 677-685; Thorpe LC (2005) J. Gen. Virol. 86, 159-169; Stokes HL (2003) J. Gen. Virol. 84, 2679-2683; Bossert B (2003) J. Virol. 77, 8661-8668; Chambers P (1990) Virus res. 18, 263-270; Easton AJ (1997) Virus Res. 48, 27-33; Pringle CR (1986) J. Gen. Virol. 67, 975-982; Brock LG (2012) J. Virol. 86, 5829-5843

*This product is for In vitro research use only.

Related material available from ADI

AE-310400-1	RecombiVirus Mouse Pneumonia Virus (PVM) IgG ELISA Kit, 96 tests
AE-310410-1	RecombiVirus Rat Pneumonia Virus (PVM) IgG ELISA Kit, 96 tests
PVMNP12-RPC	Rat Anti-Mouse Pneumonia Virus (PVM) nucleoprotein antibody positive control serum
PVMNP14-C	Recombinant purified Mouse Pneumonia Virus (PVM) nucleoprotein control for Western blot
PVMNP14-S	Rabbit Anti-Mouse Pneumonia Virus (PVM) nucleoprotein antiserum
PVMNP15-R-10	Recombinant ((E. coli, his-tag, ~44 Kda, full length, >95%) Mouse Pneumonia Virus (PVM) nucleoprotein

PVMNP14-S 140925P

India Contact:

Life Technologies (India) Pvt. Ltd.