Product Specification Sheet

Mouse Pneumonia Virus (PVM) Recombinant Protein

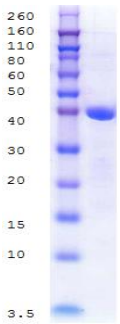
Cat # PVMNP15-R Recombinant Mouse Pneumonia Virus (PVM) nucleoprotein (PVM-NP) **SIZE**: 10 ug

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 stabilise 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



PVM-NP was expressed in E. Coli as his-tag fusion protein (PVM15 strain, full length, purity >95%, ~44 KDa). Purified protein is supplied in 50 mM Tris, pH 8, 0.25M NaCl, 5mM beta-mercaptoethanol,, 0.5mM ETDA, 0.25M imidzazole, and 8M Urea (or see lot sp. conc on the vial).

It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Storage

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

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.
Shipping: 4°C for solutions and room temp for powder.

Recommended Usage

Western Blotting: load 100-200 ng/well.

ELISA (50-100 ng antigen/well).

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. Ge. Virosl. 67, 975-982; Brock LG (2012) J. Virsol. 86, 5829-5843

*This product is for In vitro research use only.

Related material available from ADI

PVMNP11-MNC Mouse Anti-Mouse Pneumonia Virus (PVM) nucleoprotein antibody negative control serum
PVMNP11-MPC Mouse Anti-Mouse Pneumonia Virus (PVM) nucleoprotein antibody positive control serum
PVMNP12-RNC Rat Anti-Mouse Pneumonia Virus (PVM) nucleoprotein antibody negative control serum
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
AE-310400-1 RecombiVirus Mouse Pneumonia Virus (PVM) Antibody ELISA Kit, 96 tests
AE-310410-1 RecombiVirus Rat Pneumonia Virus (PVM) Antibody ELISA Kit, 96 tests

PVMNP15-R-10 140925P

Alpha Diagnostic Intl Inc., 4638 N Loop 1604 West, San Antonio, TX 78249, USA

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com