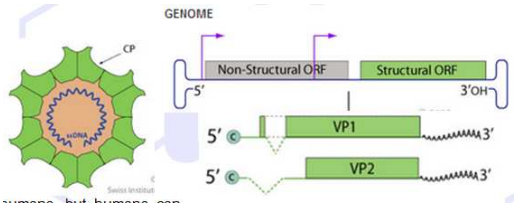
Product Specification Sheet

Minute virus of mice Capsid protein 2 (MVM-VP2) Protein

□ **Cat #** MVMVP25-R-10 Recombinant purified MVM-VP2 protein **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.



Parvoviruses (from Latin parvus meaning small) are typically linear, non-segmented single-stranded DNA viruses, with an average genome size of 5Kb. The viral capsid of a parvovirus is made up of two or three proteins, known as **VP1-3** that form an icosahedral structure that is resistant to acids, bases, solvents and temperature up to 50°C. Structural protein (NS1-2) are conserved and involved in transcription and virus replication. Capsid proteins (VP1-3) exhibit heterogeneity among different parvoviruses. Parvovirus diagnosis is by serology and ELISA. MPV is most pathogenic for haematopoietic cells than **mouse parvoviruses (MPVs): Species**: **Minute virus of mouse (MVM) or mice minute virus (MMV), Kilham rat virus (KRV**), Rat **H-1** virus (**Toolan's virus**), mouse parvovirus (MPV), hamster (HaPV) and rat parvovirus (RPV-1a). **Natural hosts**: Vertebrates.
Minute virus of mice (MVM) and mouse parvovirus (MPV or MPV-1) are among the most prevalent infectious agents detected in contemporary laboratory mouse colonies, with approximately 45 % of USA research institutions harboring these infectious agents and MPV being among the most prevalent viruses detected in research mice. Various clinical disease syndromes in mice have been associated with MVM infection and both MVM and MPV can have deleterious effects on research due to in vitro and in vivo immunomodulatory effects and contamination of cell cultures and tissues originating from mice. As a result, murine parvovirus infections comprise one of the most significant infectious disease problems encountered in contemporary laboratory animal research facilities.

Storage

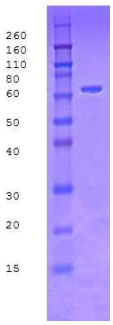
Short-term: unopened, undiluted vials for less than a week at 4oC.

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.

Source of Antigen



MVM-VP2 was expressed in E. Coli as his-tag fusion protein (full length, purity >95%, ~65 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.

Recommended Usage

Western Blotting: load 100-200 ng/well.

ELISA (50-100 ng antigen/well).

Specificity & Cross-reactivity : MVM-VP1 and VP2 are produced as a results of alternative splicing and the two proteins have significant overlap (see fig above). MVM-VP2 shares signigicant sequence conservation with the related mouse parvoviruses (~74%) and rat minute virus (72%), Kilham rat virus (71%) and canine parvovirus (52%). There is significant sequence homology of VP2 with related parvoviruses: Hamster parvovirus (66%), rat parvovirus (60%) and canine parvovirus 2a/b & mink enteritis virus, blue fox parvovirus, Feline panleukopenia virus (52%). Antibody crossreactivity of MVM-VP2 with various related VP2s has not been studies. Recombinant protein of MPV-VP2 (#MVMVP21-R-10) is available for control studies.

References: Ball-Goodrich LJ (1994) J. Virol. 68, 6476-3486; Brownstein DG (1991) Lab. Invest. 65, 357-364; Astell CR (1986) J. Virol. 57, 656-669; sahl R (1985) Nucl. Acid., red. 13, 3617-3633; Clemens KE (1990) J. Virol. 64, 3967-3973; Cotmore SF (1986) J. Virol. 58, 734-732; Hueffer K (2003) Curr. Opin. Microbiol. 6, 392-398; Kilham L (1970) Proc Soc Exp Biol Med 133, 1447–1452; Labieniec-Pintel, L (1986) J. Virol. 57, 1163-1167; Livingston RS (2003) Clin Diagn Lab Immunol 9, 1025–1031

*This product is for In vitro research use only.

Related material available from ADI

MVMVP21-C	Recombinant purified Mouse Minute Virus (MVM) capsid protein VP2 control for Western blot
MVMVP21-MNC	Mouse Anti-Mouse Minute Virus (MVM) capsid protein VP2 antibody negative control serum
MVMVP21-MPC	Mouse Anti-Mouse Minute Virus (MVM) capsid protein VP2 antibody positive control serum
MVMVP21-RNC	Rat Anti-Mouse Minute Virus (MVM) capsid protein VP2 antibody negative control serum
MVMVP21-RPC	Rat Anti-Mouse Minute Virus (MVM) capsid protein VP2 antibody positive control serum
MVMVP21-S	Rabbit Anti-Mouse Minute Virus (MVM) capsid protein VP2 antiserum
MVMVP25-R-10	Recombinant (E. coli, his-tag, ~66 Kda, full length, >95%) Mouse Minute Virus (MVM) capsid protein VP2
AE-300900-1	RecombiVirus Mouse Minute Virus (MVM) IgG ELISA Kit, 96 tests
AE-300910-1	RecombiVirus Rat Minute Virus (MVM) IgG ELISA Kit, 96 tests

MVMVP25-R-10 151106A

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