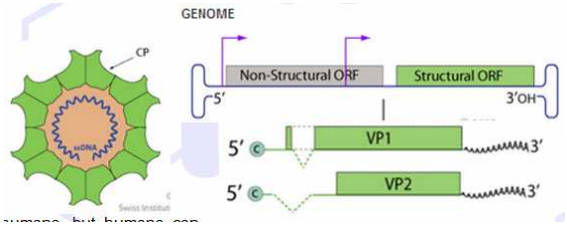
ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Mouse Parvovirus (MPV) Antibodies and Controls

□ **Cat #** MPV21-S	**Rabbit** Anti- Mouse Parvovirus Capsid Protein 2 (MPV-VP2) antiserum	**SIZE**: 100 ul
□ **Cat #** MPV21-C	Recombinant Mouse MPV-VP2 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.



Parvovirus casually applied to all the viruses in the Parvoviridae taxonomic family and also the taxonomic name of the Parvovirus genus within the Parvoviridae family. Parvoviruses (from Latin parvus meaning small) are typically linear, non-segmented single-stranded DNA viruses, with an average genome size of 5Kb. Parvoviruses tend to be specific about the taxon of animal they will infect. No members of the genus Parvovirus are currently known to infect humans, but humans can be infected by viruses within three other genera from the family Parvoviridae, including the one popularly known by the common name Parvovirus B19. 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. **Transmission**: Respiratory, oral droplets of fecal oral-route. **Geography**: Worldwide.

Source of Antigen and Antibodies

Antigen	Recombinant purified full length MPV-VP2 protein
Ab Host/type	Rabbit, Polyclonal antiserum (Cat # MPV21-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

MPV-VP2 was expressed in E. Coli as his-tag fusion protein (full ength, purity >95%, ~60 KDa). Purified MPV-VP2 protein for Western blot +ve control (**Cat #** MPV21-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # MPV21**-C** for good visibility with antibody Cat # MPV21-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 # MPV21**-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

MPV-VP1 and VP2 are produced as a results of alternative splicing and the two proteins have significant overlap (see fig above). MPV-VP2 is 9-100% conserved in various MPV subtypes (type 1-5). Therefore, anti-MPV-VP2 (#MPV21-S) may potentially cross reacts with various mouse parvoviruses. There is significant sequence homology of VP2 with related parvoviruses: Mouse and rat minute virus VP2 (69-72%), Kilham rat virus (65-67%), Hamster parvovirus (66%), rat parvovirus (60%) and canine parvovirus 2a/b (52%). Antibody crossreactivity of MPV-VP2 with various related VP2s has not been studies. Recombinant protein of MPV-VP2 (#MPV21-R-10) is available for control studies.

References: Ball-Goodrich LJ (1994) J. Virol. 68, 6476-6486; Besselsen DG (2000) Compl med. 50, 498-502; Livingston RS (2002) Clin Diagn. Lab. Immunol. 9, 1025-1031; Wan CH (2002) J. Gen. Virol. 83, 2075-2083; Shek WR (1998) Lab Anim. Sci. 48, 294-297

*This product is for In vitro research use only.

Related material available from ADI

MPV21-C Recombinant (E. coli, his-tag, ~60 Kda) Parvovirus (MPV) Capsid Protein 2 (VP2) control for Western blot
MPV21-MNC Mouse Anti-Parvovirus (MPV) Capsid Protein 2 (VP2) antibody negative control serum
MPV21-MPC Mouse Anti-Parvovirus (MPV) Capsid Protein 2 (VP2) antibody positive control serum
MPV21-R-10 Recombinant (E. coli, his-tag, ~60 Kda) Parvovirus (MPV) Capsid Protein 2 (VP2), full length (>95% pure)
MPV21-S Rabbit Anti-Parvovirus (MPV) Capsid Protein 2 (VP2) antiserum
MPV22-RNC Rat Anti-Parvovirus (MPV) Capsid Protein 2 (VP2) antibody negative control serum
MPV22-RPC Rat Anti-Parvovirus (MPV) Capsid Protein 2 (VP2) antibody positive control serum

MPV21-S 140925P

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