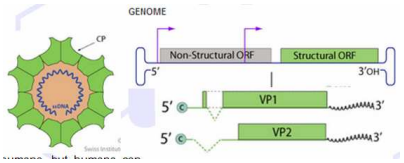
ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

**Rat Toolan's H1 (THV) capsid protein VP2**

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| □ **Cat #** THVP11-S | **Rabbit** Anti-Rat Toolan's H1 capsid protein VP2 (THV-VP2) antiserum | **SIZE**: 100 ul |
| □ **Cat #** THVP11-C | Recombinant Toolan's H1 VP2 (THV-VP2) protein Western blot 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. Animals or animal-derived products are transported from one part of the world to another in a matter of days. So there is great potential for the diseases to spread very quickly. Many infections are asymptomatic and without any overt clinical symptoms. Detection of microbial infections has relied largely on serological screening and presence of microbial antigens or antibodies.




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. 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.

Rat Toolan's H-1 (H-1/or THV) is a member of parvovirus family and closely related to the minute virus of mice (MVM). The clinical signs associated with a natural THV infection lead to cell death.

## Source of Antigen and Antibodies

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| **Antigen** | Recombinant purified THV-VP2 protein |
| **Ab Host/type** | Rabbit, Polyclonal antiserum (Cat # THVP11-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. |

THV-VP2 was expressed in E. Coli as his-tag fusion protein (full length, purity >95%, ~81 KDa). Purified THV-VP2 protein for Western blot +ve control (**Cat #** THVP11-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # THVP11-**C** for good visibility with antibody Cat # THVP11-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 # THVP11-**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**

THV-VP2 protein has high sequence homology with related paroviruses VP2 (rat kilham virus ~80% mouse and rat minute viruses ~70%). Therefore, anti-rat THV-VP2 antibody may potentially crossreacts with VP2 of these related viruses. Recombinant purified rat THV-VP2 protein is available for control studies.

**References**: Czieplluch, C (2000) J. Virol. 74, 4807, 4815; Chen YQ (1986) Cancer Res. 46, 3574-3579; Faisst SSR (1995) J. Virol. 69, 4538-4543; Singer II (1978) Virol. 65, 4054; Rayet B (1998) J. Virol. 72, 8893-8903;

*This product is for In vitro research use only.

**Related material available from ADI**

THVP11-C Recombinant purified Rat Toolan's H1 parvovirus (THV) capsid protein VP2 control for Western blot
THVP11-RNC Rat Anti-Toolan's H1 parvovirus (THV) capsid protein VP2 antibody negative control serum
THVP11-RPC Rat Anti-Toolan's H1 parvovirus (THV) capsid protein VP2 antibody positive control serum
THVP11-S Rabbit Anti-Rat Toolan's H1 parvovirus (THV) capsid protein VP2 antiserum
THVP15-R-10 Recombinant (E. coli, his-tag, ~81 Kda, full length, >95%) Toolan's H1 parvovirus (THV) capsid protein VP2

THVP11_S 140925P

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