ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Anti-Rat Kilham Virus (KRV) capsid protein VP2 (KRP-VP2) antiserum Antibodies and Controls

□ **Cat #** KRVP21-S	**Rabbit** Anti-Rat Kilham Virus (KRV) capsid protein VP2 antiserum	**SIZE**: 100 ul
□ **Cat #** KRVP21-C	Recombinant purified KRV capsid protein VP2 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.

The Kilham rat virus (KRV) is a parvovirus originally isolated from a rat sarcoma in the late 1950s. The clinical signs associated with a natural KRV infection include fetal resorption in dams, runting, ataxia, cerebellar hypoplasia and jaundice in suckling rats, and sudden death, scrotal cyanosis, abdominal swelling and dehydration in juvenile rats. The ability of this virus to produce persistent infections has resulted in a high frequency of contamination of cell cultures and transplantable-tumor system. In addition, the virus may interfere with research in other ways. The remarkable resistance to environmental conditions determines the importance of the detection and control of this agent, especially in the laboratory animal production. According to a study, the seroprevalence varied between 27.8% and 75%.

KRV produces intranuclear inclusion bodies in epithelial connective tissue and fibroblastic rat embryo cells. KRV causes highly pathogenic infections, especially in liver and cerebellum. KRV is a single stranded DNA virus. It shares homology with MVM and MPV. KRV viral protein 2 (KRV-VP2, 582 aa) is one of the major antigenic protein.

Source of Antigen and Antibodies

Antigen	Recombinant purified KRV-VP2 protein.
Ab Host/type	Rabbit, Polyclonal antiserum (Cat # KRVP21-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

KRV-VP2 was expressed in E. Coli as his-tag fusion protein (full length, purity >95%, ~65 KDa). Purified KRPV-VP2 protein for Western blot +ve control (**Cat #** KRVP21-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **#KRVP21-C** for good visibility with antibody Cat # **KRVP21**-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 **#KRVP21-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

KRV-VP2 protein (582-aa) has high sequence homology with VP2 proteins of Rat minute viruses VP2 1a-c, 2a, Hamster parvoviruses (72%), rat and mouse parvoviruses minute and parvoviruses (64-72%). Therefore, anti-rat KRV-VP2 antibody may potentially crossreacts with VP2 of these related viruses.

References: Schoolermark-van de ven EME (2005) Lab. Animals 40, 137-143; Wan CH (2002) J. Gen. Virol. 83, 2075-2083; Salzman L (1970) J. Virol. 1970, 114-122;

*This product is for In vitro research use only.

Related material available from ADI

KRVP21-R-10 Recombinant (E. coli, his-tag, ~65 Kda, full length, >95%) Rat Kilham Virus (KRV) capsid protein VP2
KRVP21-RNC Rat Anti-Rat Kilham Virus (KRV) capsid protein VP2 antibody negative control serum
KRVP21-RPC Rat Anti-Rat Kilham Virus (KRV) capsid protein VP2 antibody positive control serum
KRVP21-S Rabbit Anti-Rat Kilham Virus (KRV) capsid protein VP2 antiserum
KVP11-MNC Mouse Anti-Polyomavirus (KV, Pneumotropic virus) Capsid Protein 1 (VP1) antibody negative control
KVP14-C Recombinant (E. coli, his-tag, ~42 Kda) Mouse Polyoma Virus (KV, Pneumotropic virus) Capsid Protein 1 (VP1) control for Western blot
KVP14-S Rabbit Anti-Polyomavirus (KV, Pneumotropic virus) Capsid Protein 1 (VP1) antiserum
KVP15-R-10 Recombinant (E. coli, his-tag, ~42 Kda) Mouse Polyoma Virus (KV, Pneumotropic virus) Capsid Protein 1 (VP1), full length (>95% pure)

KRVP21-S 140924P

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com