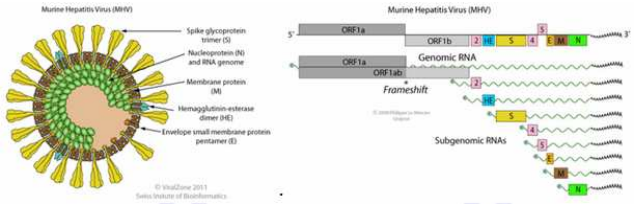
ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Rat sialodacryoadenitis Virus (SDAV) nucleoprotein Antibodies and Controls

□ **Cat #** SDAV11-S	**Rabbit** Anti- Rat sialodacryoadenitis Virus nucleoprotein (SDAV-NP) antiserum	**SIZE**: 100 ul
□ **Cat #** SDAV11-C	Recombinant Rat sialodacryoadenitis Virus nucleoprotein (SDAV-NP) WB +ve 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.



Sialodacryoadenitis virus (**SDAV**) is distributed worldwide in laboratory rats. SDAV infects the lacrimal and salivary glands and the upper and lower respiratory tracts of rats, causing the clinical manifestations of enlarged salivary glands, sialoadenitis, dacryoadenitis, rhinitis, tracheitis, and bronchoalveolitis. SDAV can also cause reproductive disorders and behavioral changes in the infected animals. Serologic surveys indicate that coronavirus infections are common in laboratory rats housed in research facilities and several outbreaks of SDAV in rat colonies have been reported. Therefore, SDAV is an important viral pathogen in comparative laboratory medicine. SDAV is antigenically related to the mouse hepatitis virus (MHV) serogroup of the family Coronaviridae in the order of Nidovirales. The MHV serogroup includes Parker's rat coronavirus (PRCV), bovine coronavirus (BCV), and human coronavirus (HCV) strain OC43. As with mouse hepatitis coronaviruses (MHVs), the SDAV genome was code for at least three structural proteins associated with the virion: **spike (S) protein, membrane (M) protein, and nucleocapsid (N) protein**. Antibodies specific for MHV structural proteins were able to recognize both SDAV and PRCV proteins on immunoblots.

Source of Antigen and Antibodies

Antigen	Recombinant purified rat SDVA-NP protein
Ab Host/type	Rabbit, Polyclonal antiserum (Cat # SDAV11-S) supplied in 0.05% azide as preservative.
2-Ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Rat SDAV-NP was expressed in E. Coli as his-tag fusion protein (full length, purity >95%, ~49.5 KDa). Purified SDAV-NP protein for Western blot +ve control (**Cat #** SDAV11-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # SDAV11-**C** for good visibility with antibody Cat # SDAV11-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 # SDAV11-**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: Rat SDAV-NP protein is highly conserved in coronaviruses from several species: murine corona/MHV (94%), porcine, equine, human, bovine, and canine coronaviruses (~72%). Anti-rat SDAV-NP are expected to crossreact with coronaviruses NP from various species. However, antibody crossreactivity has not been established. Recombinant purified rat SDAV-VP6 protein is available for control studies.

References: Barker MG (1994) Can J. Vet. Res. 58, 99-103; Yood D (2000) Clin. Diagn. Lab. Immunol.7, 568-573; Bhatt PN (1972) J. Infect. Dis. 126, 123-130; Bhatt PN (1977) Infec. Immun. 18, 823-827; Kunita S (1993) Virol. 193, 520-523.

*This product is for In vitro research use only.

Related material available from ADI

SDAV11-C Recombinant Rat sialodacryoadenitis Virus (SDAV) nucleoprotein control for Western blot
SDAV11-RNC Rat Anti-Rat sialodacryoadenitis Virus (SDAV) nucleoprotein antibody negative control serum
SDAV11-RPC Rat Anti-Rat sialodacryoadenitis Virus (SDAV) nucleoprotein antibody positive control serum
SDAV11-S Rabbit Anti-Rat sialodacryoadenitis Virus (SDAV) nucleoprotein antiserum
SDAV15-R-10 Recombinat (E. coli, his-tag, ~49 Kda, full length, >95%) Rat sialodacryoadenitis Virus (SDAV) nucleoprotein

SDAV11-S 140925P