



## SIALODACRYOADENITIS VIRUS (RCV/SDAV)

### CLASSIFICATION

Family: *Coronaviridae*

Genus: *Coronavirus*

- Non-Enveloped, RNA virus
- Linear, single-stranded, positive-sense
- 27-33 kbp genome
- 80-160 nm in diameter (average 114 nm)

### PREVALENCE

One of the most common viruses in laboratory rats. Mice are not natural hosts, but may be experimentally infected.

### DIAGNOSIS

ELISA, IFA, RT-PCR, Histopathological examination (Harderian glands, submaxillary and parotid salivary glands)

### DISEASE/CLINICAL SIGNS

Natural infections may be

- Enzootic in breeding colonies – adults are immune due to previous infection. Suckling rats have transient conjunctivitis characterised by blinking. Clinical signs usually disappear by weaning age.
- Epizootic in susceptible weanlings or adults – incubation period often less than one week. Signs include sneezing, photophobia, nasal and ocular discharge to name a few. Most clinical signs disappear in approximately one week.

Mild interstitial pneumonia has been seen in experimental cases.

Disease in athymic rats is more severe, is persistent (up to 6 months) and may be fatal.

### STRAINS

Multiple strains exist and tissue tropisms differ between strains. Some strains affect the respiratory tract.

### TRANSMISSION

SDAV is highly contagious and spreads rapidly within rooms of susceptible rats by contact and aerosol. It is not transmitted vertically.

LEW, WAG/Rij and SHR rats are more susceptible than other strains such as Wistar, LE and F344 rats.



# INFORMATION SHEET

## INTERFERENCE WITH RESEARCH

Effects include but are not limited to:

- Interference with studies involving eyes, salivary and lacrimal glands, or respiratory system
- Reduced reproduction and growth rates
- Alteration of oestrous cycles
- Anorexia and weight loss
- Reduce IL-1 production by alveolar macrophages

## DURABILITY

Sensitive to

- Lipid solvents
- Drying and disinfectants (especially those with detergent activity)

Infectivity is lost at:

- Room temperature
- Freezing to -20oC
- Heating to 56oC

## CONTROL

Infected rats shed for approximately 7 days and latent infections do not occur, thus infections in breeding colonies can be eliminated by quarantining the room, suspending breeding and culling all newborn pups for 6 to 8 weeks.

For non-breeding colonies, suspend introduction of new animals for 6 to 8 weeks. Recovered rats are considered free of virus

## POST INFECTION

The most effective way to eliminate SDAV is to cull all infected animals and obtain clean replacement stock. Caesarean derivation is effective, however with such short disease periods this technique is usually impractical.

## BIBLIOGRAPHY

**Baker, D.G.** 1998. Natural Pathogens of Laboratory Animals. Clin. Microbiol. Rev. **11**:245.

**Nicklas, W et al (GV-SOLAS Working Group on Hygiene).** 1999. Laboratory Animals. **33** (Suppl.1) S1:47.