

Coronavirus (FIPV3-70): sc-65653

BACKGROUND

Coronavirus is a genus of animal virus that belongs to the family *Coronaviridae*. Coronaviruses are enveloped viruses with a positive-sense single-stranded RNA genome and a helical symmetry that resemble a crown when viewed under an electron microscope. They primarily infect the upper respiratory and gastrointestinal tract of mammals and birds. Four or five different known strains of Coronavirus infect humans and are thought to be the cause of many common colds. The most publicized human Coronavirus, SARS-CoV, causes both upper and lower respiratory tract infections and can also cause gastroenteritis.

REFERENCES

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2. Foley, J.E. and Leutenegger, C. 2001. A review of Coronavirus infection in the central nervous system of cats and mice. *J. Vet. Intern. Med.* 15: 438-444.
3. Ying, W., et al. 2004. Proteomic analysis on structural proteins of severe acute respiratory syndrome Coronavirus. *Proteomics* 4: 492-504.
4. Yu, C.J., et al. 2004. Identification of a novel protein 3a from severe acute respiratory syndrome Coronavirus. *FEBS Lett.* 565: 111-116.
5. Ebihara, T., et al. 2005. Detection of human Coronavirus NL63 in young children with bronchiolitis. *J. Med. Virol.* 75: 463-465.
6. Esper, F., et al. 2005. Association between a novel human Coronavirus and Kawasaki disease. *J. Infect. Dis.* 191: 499-502.
7. Shi, X., et al. 2005. Severe acute respiratory syndrome associated Coronavirus is detected in intestinal tissues of fatal cases. *Am. J. Gastroenterol.* 100: 169-176.
8. Gerna, G., et al. 2006. Genetic variability of human coronavirus OC43-, 229E-, and NL63-like strains and their association with lower respiratory tract infections of hospitalized infants and immunocompromised patients. *J. Med. Virol.* 78: 938-949.
9. Watanabe, R., et al. 2006. Receptor-independent infection of murine Coronavirus: analysis by spinoculation. *J. Virol.* 80: 4901-4908.

SOURCE

Coronavirus (FIPV3-70) is a mouse monoclonal antibody raised against Coronavirus.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Coronavirus (FIPV3-70) is recommended for detection of Coronavirus of Coronavirus origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); binds to the nucleoprotein of SARS-CoV-2 (COVID-19).

Molecular Weight of Coronavirus spike glycoprotein: 151 kDa.

Molecular Weight of Coronavirus nucleocapsid: 46 kDa.

SELECT PRODUCT CITATIONS

1. Regan, A.D., et al. 2012. Characterization of a recombinant canine coronavirus with a distinct receptor-binding (S1) domain. *Virology* 430: 90-99.
2. Rolim, V.M., et al. 2016. Myocarditis caused by feline immunodeficiency virus in five cats with hypertrophic cardiomyopathy. *J. Comp. Pathol.* 154: 3-8.
3. Malbon, A.J., et al. 2019. Inflammatory mediators in the mesenteric lymph nodes, site of a possible intermediate phase in the immune response to feline Coronavirus and the pathogenesis of feline infectious peritonitis? *J. Comp. Pathol.* 166: 69-86.
4. Cipolloni, L., et al. 2020. Preliminary post-mortem COVID-19 evidence of endothelial injury and Factor VIII hyperexpression. *Diagnostics* 10: E575.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.