

Flavivirus (3571): sc-58128

BACKGROUND

Flaviviruses are among the most important emerging viruses with respect to the human population since many of them are pathogenic and cause endemic and epidemic disease with significant morbidity and mortality throughout the world. Flavivirus represents a genus of the family Flaviviridae that comprises over 70 viruses such as the West Nile virus, Dengue Virus, Tick-borne Encephalitis Virus, Yellow Fever Virus and several other viruses which cause encephalitis. Infection by the neurotropic Japanese encephalitis Flavivirus leads to increased expression of class I and II MHC and various adhesion molecules, resulting in increased susceptibility to both virus- and MHC-specific cytotoxic T lymphocyte lysis. Although Flaviviruses share many antigenic inter-relationships, they can be divided into four phylogenetic/ecological groups: two mosquito-borne groups, a tick-borne group and nonvector-borne viruses. Flavivirus are 40-60 nm with an enveloped, icosahedral nucleocapsid that holds their positive-sense, single stranded RNA genome.

REFERENCES

1. Kuno, G., Chang, G.J., Tsuchiya, K.R., Karabatsos, N. and Cropp, C.B. 1998. Phylogeny of the genus Flavivirus. *J. Virol.* 72: 73-83.
2. Solomon, T. and Mallewa, M. 2001. Dengue and other emerging Flaviviruses. *J. Infect.* 42: 104-115.
3. Gaunt, M.W., Sall, A.A., de Lamballerie, X., Falconar, A.K., Dzhanian, T.I. and Gould, E.A. 2001. Phylogenetic relationships of Flaviviruses correlate with their epidemiology, disease association and biogeography. *J. Gen. Virol.* 82: 1867-1876.
4. Kesson, A.M., Cheng, Y. and King, N.J. 2002. Regulation of immune recognition molecules by Flavivirus, West Nile. *Viral Immunol.* 15: 273-283.
5. Diamond, M.S. 2003. Evasion of innate and adaptive immunity by Flaviviruses. *Immunol. Cell Biol.* 81: 196-206.
6. King, N.J. and Kesson, A.M. 2003. Interaction of Flaviviruses with cells of the vertebrate host and decoy of the immune response. *Immunol. Cell Biol.* 81: 207-216.
7. Lobigs, M., Müllbacher, A. and Regner, M. 2003. MHC class I upregulation by Flaviviruses: Immune interaction with unknown advantage to host or pathogen. *Immunol. Cell Biol.* 81: 217-223.
8. Gould, E.A., de Lamballerie, X., Zanotto, P.M. and Holmes, E.C. 2003. Origins, evolution and vector/host coadaptations within the genus Flavivirus. *Adv. Virus Res.* 59: 277-314.
9. King, N.J., Shrestha, B. and Kesson, A.M. 2003. Immune modulation by Flaviviruses. *Adv. Virus Res.* 60: 121-155.

SOURCE

Flavivirus (3571) is a mouse monoclonal antibody raised against purified St. Louis Encephalitis virus.

PRODUCT

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

APPLICATIONS

Flavivirus (3571) is recommended for detection of Flavivirus by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SELECT PRODUCT CITATIONS

1. Kumar, S., Dick, E.J., Jr, Bommineni, Y.R., Yang, A., Mubiru, J., Hubbard, G.B. and Owston, M.A. 2014. Reovirus-associated meningoencephalomyelitis in baboons. *Vet. Pathol.* 51: 641-650.
2. Frydman, G.H., Metcalf Pate, K.A., Marini, R.P., de Laforcade, A.M., Bosch, I., Bakthavatchalu, V., Muthupalani, S., Swennes, A.G., Lyons, C.E., Tompkins, R.G. and Fox, J.G. 2017. Adult-onset, chronic, cyclic thrombocytopenia in a Rhesus macaque (*Macaca mulatta*) after dengue virus vaccination and viral challenge. *Vet. Clin. Pathol.* 46: 238-247.
3. Redant, V., Favoreel, H.W., Dallmeier, K., Van Campe, W. and De Regge, N. 2020. Efficient control of Japanese encephalitis virus in the central nervous system of infected pigs occurs in the absence of a pronounced inflammatory immune response. *J. Neuroinflammation* 17: 315.

STORAGE

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

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.