

# Dengue Virus 2 (V-12): sc-325016

## BACKGROUND

Dengue Virus, a member of the genus *Flavivirus* and family *Flaviviridae*, causes Dengue fever, the acute febrile disease found in the tropics. This infectious disease is characterized by a sudden onset of fever, with severe headache, muscle and joint pains and rashes, and lasts about six to seven days. Dengue Virus is transmitted to humans via mosquitos. The Dengue Virus genome is a single-stranded positive-sense RNA that encodes three structural proteins (capsid, membrane and envelope) and seven nonstructural proteins (NS1, NS2A, NS2B, NS3, NS4A, NS4B and NS5). Four serotypes of the Dengue Virus exist: Dengue Virus 1, 2, 3 and 4. Dengue Virus 1 represents a unique strain that first appeared in 1987.

## REFERENCES

- Hotta, S. and Evans, C.A. 1956. Cultivation of mouse-adapted Dengue Virus (type 1) in rhesus monkey tissue culture. *J. Infect. Dis.* 98: 88-97.
- Barth, O.M. and Schatzmayr, H.G. 1993. Brazilian Dengue Virus type 1 replication in mosquito cell cultures. *Mem. Inst. Oswaldo Cruz* 87: 1-7.
- Serufo, J.C., de Oca, H.M., Tavares, V.A., Souza, A.M., Rosa, R.V., Jamal, M.C., Lemos, J.R., Oliveira, M.A., Nogueira, R.M. and Schatzmayr, H.G. 1994. Isolation of Dengue Virus type 1 from larvae of *Aedes albopictus* in Campos Altos city, State of Minas Gerais, Brazil. *Mem. Inst. Oswaldo Cruz* 88: 503-504.
- Yao, Z.J., Kao, M.C., Loh, K.C. and Chung, M.C. 1995. A serotype-specific epitope of Dengue Virus 1 identified by phage displayed random peptide library. *FEMS Microbiol. Lett.* 127: 93-98.
- Flamand, M., Megret, F., Mathieu, M., Lepault, J., Rey, F.A. and Deubel, V. 1999. Dengue Virus type 1 nonstructural glycoprotein NS1 is secreted from mammalian cells as a soluble hexamer in a glycosylation-dependent fashion. *J. Virol.* 73: 6104-6110.
- Goncalvez, A.P., Escalante, A.A., Pujol, F.H., Ludert, J.E., Tovar, D., Salas, R.A. and Liprandi, F. 2002. Diversity and evolution of the envelope gene of Dengue Virus type 1. *Virology* 303: 110-119.
- Hwang, K.P., Chu, P.Y., Tung, Y.C., Wang, H.L., Yueh, Y.Y., Wu, Y.C., Chin, C. and Lin, K.H. 2003. Molecular epidemiological study of Dengue Virus type 1 in Taiwan. *J. Med. Virol.* 70: 404-409.
- Santos, C.L., Sallum, M.A., Foster, P.G. and Rocco, I.M. 2004. Molecular analysis of the Dengue Virus type 1 and 2 in Brazil based on sequences of the genomic envelope-nonstructural protein 1 junction region. *Rev. Inst. Med. Trop. Sao Paulo* 46: 145-152.
- Domingo, C., Palacios, G., Jabado, O., Reyes, N., Niedrig, M., Gascón, J., Cabrerizo, M., Lipkin, W.I. and Tenorio, A. 2006. Use of a short fragment of the C-terminal E gene for detection and characterization of two new lineages of Dengue Virus 1 in India. *J. Clin. Microbiol.* 44: 1519-1529.

## SOURCE

Dengue Virus 2 (V-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of envelope protein E of Dengue Virus serotype 2 origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-325016 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Dengue Virus 2 (V-12) is recommended for detection of Dengue Virus 2 of Dengue Virus serotype 2 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Dengue Virus 1, Dengue Virus 3 or Dengue Virus 4.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **Dengue Virus 4 (ICL4): sc-65728**, our highly recommended monoclonal alternative to Dengue Virus 4 (V-12).