SANTA CRUZ BIOTECHNOLOGY, INC.

HSV-1 gC (H633): sc-69800



BACKGROUND

Herpes simplex virus-1 (HSV-1) is a member of the *Herpesviridae* family of DNA viruses that have relatively large, double-stranded linear genomes within an icosahedral capsid which is wrapped in a lipid bilayer envelope. HSV-1 causes painful, watery blisters in the skin and/or mucous membranes of infected individuals. The disease is contagious, particularly during an outbreak, and is transmitted by direct contact. When not symptomatic, HSV-1 lies dormant in the bodies of the nerve cells, replicating within the axons towards the skin. HSV-1 glycoprotein C (HSV-1 gC) is an immune evasion molecule that binds to and inhibits the complement component C3b, thereby protecting the virus from complement-mediated neutralization. HSV-1 gC also enhances coagulation Factor VIIa activity on the virus, which activates Factor X.

REFERENCES

- Bystricka, M., Vancikova, M., Kasalova, M., Rajcani, J., Kostal, M., Muranyiova, M., Polakova, K. and Russ, G. 1991. Type-common and typespecific monoclonal antibodies to herpes simplex virus types-1 and -2. Acta Virol. 35: 152-64.
- Bystricka, M., Petrikova, M., Zatovicova, M., Solarikova, L., Kostolansky, F., Mucha, V. and Russ, G. 1997. Monoclonal antibodies to the distinct antigenic sites on glycoproteins C and B and their protective abilities in herpes simplex virus infection. Acta Virol. 41: 5-12.
- Bystricka, M., Zatovicova, M., Petrikova, M., Solarikova, L., Russ, G. and Ziegler, T. 1999. Monoclonal antibodies suitable for type-specific identification of herpes simplex viruses by a rapid culture assay. Acta Virol. 43: 399-402.
- Gregory, D., Hargett, D., Holmes, D., Money, E. and Bachenheimer, S.L. 2004. Efficient replication by herpes simplex virus type-1 involves activation of the IκB kinase-IκB-p65 pathway. J. Virol. 78: 13582-13590.
- Sutherland, M.R., Friedman, H.M. and Pryzdial, E.L. 2004. Herpes simplex virus type-1-encoded glycoprotein C enhances coagulation Factor VIIa activ-ity on the virus. Thromb. Haemost. 92: 947-955.
- Chang, Y.J., Jiang, M., Lubinski, J.M., King, R.D. and Friedman, H.M. 2005. Implications for herpes simplex virus vaccine strategies based on antibodies produced to herpes simplex virus type-1 glycoprotein gC immune evasion domains. Vaccine 23: 4658-4665.
- Livingston, J.R., Sutherland, M.R., Friedman, H.M. and Pryzdial, E.L. 2005. Herpes simplex virus type-1-encoded glycoprotein C contributes to direct coagulation Factor X-virus binding. Biochem. J. 393: 529-535.
- Perelygina, L., Patrusheva, I., Hombaiah, S., Zurkuhlen, H., Wildes, M.J., Patrushev, N. and Hilliard, J. 2005. Production of herpes B virus recombinant glycoproteins and evaluation of their diagnostic potential. J. Clin. Microbiol. 43: 620-628.
- Hook, L.M., Lubinski, J.M., Jiang, M., Pangburn, M.K. and Friedman, H.M. 2006. Herpes simplex virus type-1 and -2 glycoprotein C prevents complement-mediated neutralization induced by natural immunoglobulin M antibody. J. Virol. 80: 4038-4046.

SOURCE

HSV-1 gC (H633) is a mouse monoclonal antibody raised against HSV-1.

PRODUCT

Each vial contains 200 $\mu g~lg G_{2b}$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HSV-1 gC (H633) is recommended for detection of gC, also designated glycoprotein C, of HSV-1 by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of HSV-1 gC: 120 kDa.

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.