



HSV-1 gC Envelope Protein (1.B.36): sc-57844

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

1. Bystricka, M., Vancikova, M., Kasalova, M., Rajcani, J., Kostal, M., Muranyi, M., Polakova, K. and Russ, G. 1991. Type-common and type-specific monoclonal antibodies to herpes simplex virus types 1 and 2. *Acta Virol.* 35: 152-64.
2. 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.
3. 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.
4. 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 I κ B kinase-I κ B-p65 pathway. *J. Virol.* 78: 13582-13590.
5. Sutherland, M.R., Friedman, H.M. and Prydzial, E.L. 2004. Herpes simplex virus type 1-encoded glycoprotein C enhances coagulation Factor VIIa activity on the virus. *Thromb. Haemost.* 92: 947-955.
6. 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.
7. Livingston, J.R., Sutherland, M.R., Friedman, H.M. and Prydzial, E.L. 2005. Herpes simplex virus type 1-encoded glycoprotein C contributes to direct coagulation Factor X-virus binding. *Biochem. J.* 393: 529-535.
8. 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.
9. 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 Envelope Protein (1.B.36) is a mouse monoclonal antibody raised against full length HSV-1 gC Envelope Protein.

PRODUCT

Each vial contains 100 μ g IgG₂ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HSV-1 gC Envelope Protein (1.B.36) is recommended for detection of HSV-1 gC Envelope Protein by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (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 or our catalog for detailed protocols and support products.