SANTA CRUZ BIOTECHNOLOGY, INC.

CMV gB (CH28): sc-69742

BACKGROUND

Cytomegalovirus (CMV) is a member of the herpes virus group which includes herpes simplex virus types 1 and 2; Varicella Zoster virus, which causes chicken pox; and Epstein Barr virus, which causes infectious mononucleosis. These viruses remain dormant within the body over a long period. In humans, CMV is known as HCMV or human herpesvirus-5 (HHV-5). HHV-5 causes only a brief mononeucleosis-like malaise in immunocompetent adults, but may cause severe illness or death in immunosuppressed individuals. CMV gB (CMV glycoprotein B) is an abundant virion envelope protein that is essential for the infectivity of CMV. CMV gB is also one of the most immunogenic virus-encoded proteins, and a significant fraction of virus neutralizing antibodies are directed at CMV gB.

REFERENCES

1. Gönczöl, E., deTaisne, C., Hirka, G., Berencsi, K., Lin, W.C., Paoletti, E. and Plotkin, S. 1991. High expression of human Cytomegalovirus (HCMV) gB protein in cells infected with a vaccinia-gB recombinant: the importance of the gB protein in HCMV immunity. Vaccine 9: 631-637.
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3. Jarvis, M.A., Fish, K.N., Söderberg-Naucler, C., Streblow, D.N., Meyers, H.L., Thomas, G. and Nelson, J.A. 2002. Retrieval of human Cytomegalovirus glycoprotein B from cell surface is not required for virus envelopment in astrocytoma cells. J. Virol. 76: 5147-5155.
4. Carraro, E. and Granato, C.F. 2003. Single human Cytomegalovirus gB genotype shed in multiple sites at the time of diagnosis in renal transplant recipients. J. Med. Virol. 70: 240-243.
5. Homman-Loudiyi, M., Hultenby, K., Britt, W. and Söderberg-Naucler, C. 2003. Envelopment of human Cytomegalovirus occurs by budding into Golgi-derived vacuole compartments positive for gB, Rab 3, *trans*-Golgi network 46, and mannosidase II. J. Virol. 77: 3191-3203.
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7. Jarvis, M.A., Jones, T.R., Drummond, D.D., Smith, P.P., Britt, W.J., Nelson, J.A. and Baldick, C.J. 2003. Phosphorylation of human Cytomegalovirus glycoprotein B (gB) at the acidic cluster casein kinase 2 site (Ser 900) is required for localization of gB to the *trans*-Golgi network and efficient virus replication. J. Virol. 78: 285-293.
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9. Heineman, T.C., Connolly, P., Hall, S.L. and Assefa, D. 2004. Conserved cytoplasmi and HCMV gB. Virology 328: 131-141.

SOURCE

CMV gB (CH28) is a mouse monoclonal antibody raised against CMV.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CMV gB (CH28) is recommended for detection of CMV gB (glycoprotein B) antigen of CMV origin 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 full length CMV gB protein: 160 kDa.

Molecular Weight of CMV gB cleavage products: 55/110 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Oduro, J.D., Uecker, R., Hagemeier, C. and Wiebusch, L. 2012. Inhibition of human Cytomegalovirus immediate-early gene expression by cyclin A2-dependent kinase activity. J. Virol. 86: 9369-9383.
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3. John, S., Yuzhakov, O., Woods, A., Deterling, J., Hassett, K., Shaw, C.A. and Ciaramella, G. 2018. Multi-antigenic human cytomegalovirus mRNA vaccines that elicit potent humoral and cell-mediated immunity. Vaccine 36: 1689-1699.
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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.