SANTA CRUZ BIOTECHNOLOGY, INC.

CMV pp72 (6E1): sc-69834

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 immediate early (CMV IE) proteins are present during active CMV infection and they activate the extracellular matrix proteins Thrombospondin 1 and Thrombospondin 2. The CMV IE protein CMV pp72 interacts with another CMV IE protein CMV pp86 to stimulate the expression of HLA-G, a non-classical MHC class 1 molecule, during viral infection. The CMV IE promoter is activated by the inflammatory process proteins: tumor necrosis factor (TNFα), interleukin 1β (IL-1β) and interleukin 4 (IL-4).

REFERENCES

1. Boppana, S.B., et al. 1992. Evaluation of a microtiter plate fluorescent-antibody assay for rapid detection of human Cytomegalovirus infection. J. Clin. Microbiol. 30: 721-723.
2. Onno, M., et al. 2000. Modulation of HLA-G antigens expression by human Cytomegalovirus: specific induction in activated macrophages harboring human Cytomegalovirus infection. J. Immunol. 164: 6426-6434.

SOURCE

CMV pp72 (6E1) is a mouse monoclonal antibody raised against recombinant partial length pp72 of CMV origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CMV pp72 (6E1) is available conjugated to agarose (sc-69834 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-69834 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69834 PE), fluorescein (sc-69834 FITC), Alexa Fluor® 488 (sc-69834 AF488), Alexa Fluor® 546 (sc-69834 AF546), Alexa Fluor® 594 (sc-69834 AF594) or Alexa Fluor® 647 (sc-69834 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-69834 AF680) or Alexa Fluor® 790 (sc-69834 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CMV pp72 (6E1) is recommended for detection of pp72 of CMV origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of CMV pp72: 72 kDa.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

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

SELECT PRODUCT CITATIONS

1. Lepiller, Q., et al. 2013. HCMV activates the IL-6-JAK-Stat3 axis in Hep G2 cells and primary human hepatocytes. PLoS ONE 8: e59591.
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3. Rieder, F.J., et al. 2016. Microbial cryptotopes are prominent targets of B-cell immunity. Sci. Rep. 6: 31657.
4. Kabanova, A., et al. 2016. Platelet-derived growth factor-α receptor is the cellular receptor for human Cytomegalovirus gHgLgO trimer. Nat. Microbiol. 1: 16082.
5. Rieder, F.J., et al. 2017. Human Cytomegalovirus infection downregulates vitamin-D receptor in mammalian cells. J. Steroid Biochem. Mol. Biol. 165: 356-362.
6. Liao, H., et al. 2017. Human Cytomegalovirus downregulates SLITRK6 expression through IE2. J. Neurovirol. 23: 79-86.
7. Martinez-Martin, N., et al. 2018. An unbiased screen for human Cytomegalovirus identifies neuropilin-2 as a central viral receptor. Cell 174: 1158-1171.e19.
8. Perotti, M., et al. 2020. Rationally designed human Cytomegalovirus gB nanoparticle vaccine with improved immunogenicity. PLoS Pathog. 16: e1009169.
9. Mauch-Mücke, K., et al. 2020. Evidence for tethering of human cytomegalovirus genomes to host chromosomes. Front. Cell. Infect. Microbiol. 10: 577428.
10. Stecher, C., et al. 2021. Protein phosphatase 1 regulates human Cytomegalovirus protein translation by restraining AMPK signaling. Front. Microbiol. 12: 698603.
11. Haidar Ahmad, S., et al. 2021. Distinct oncogenic transcriptomes in human mammary epithelial cells infected with cytomegalovirus. Front. Immunol. 12: 772160.
12. Kschonsak, M., et al. 2022. Structural basis for HCMV Pentamer receptor recognition and antibody neutralization. Sci. Adv. 8: eabm2536.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.