SANTA CRUZ BIOTECHNOLOGY, INC.

CMV pp28 (5C3): sc-56975

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 pp28 is a myristylated CMV phosphoprotein encoded by the UL99 gene that is essential for production of infectious virions. The CMV pp28 protein is located within the tegument of the virus, a protein structure that is positioned between the capsid and envelope. Specifically, intracellular localization of CMV pp28 is required for virus assembly.

REFERENCES

1. Alford, C.A., et al. 1990. Congenital and perinatal Cytomegalovirus infections. Rev. Infect. Dis. 12: S745-S753.
2. Rubin, R.H. 1990. Impact of Cytomegalovirus infection on organ transplant recipients. Rev. Infect. Dis. 12: S754-S766.
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4. Boeckh, M. and Boivin, G. 1998. Quantitation of Cytomegalovirus: methodologic aspects and clinical applications. Clin. Microbiol. Rev. 11: 533-554.
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6. Gaytant, M.A., et al. 2002. Congenital Cytomegalovirus infection: review of the epidemiology and outcome. Obstet. Gynecol. Surv. 57: 245-256.
7. Britt, W.J., et al. 2003. Rapid genetic engineering of human Cytomegalovirus by using a λ phage linear recombination system: demonstration that pp28 (UL99) is essential for production of infectious virus. J. Virol. 78: 539-543.
8. Fletcher, J.M., et al. 2005. Cytomegalovirus-specific $CD4^+$ T cells in healthy carriers are continuously driven to replicative exhaustion. J. Immunol. 175: 8218-8225.

SOURCE

CMV pp28 (5C3) is a mouse monoclonal antibody raised against CMV.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CMV pp28 (5C3) is recommended for detection of pp28 tegument protein 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); may weakly cross-react with HSV-1.

Molecular Weight of CMV pp28: 28 kDa.

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. Buchkovich, N.J., et al. 2010. Role of the endoplasmic reticulum chaperone BiP, SUN domain proteins, and dynein in altering nuclear morphology during human Cytomegalovirus infection. J. Virol. 84: 7005-7017.
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3. Meissner, C.S., et al. 2011. A "coiled-coil" motif is important for oligomerization and DNA binding properties of human Cytomegalovirus protein UL77. PLoS ONE 6: e25115.
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13. Zimmermann, C., et al. 2020. Autophagy interferes with human cytomegalovirus genome replication, morphogenesis, and progeny release. Autophagy. E-published.

RESEARCH USE

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