SANTA CRUZ BIOTECHNOLOGY, INC.

HSV-1/2 ICP27 (H1142): sc-69806

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Two serotypes of the herpes simplex virus, HSV-1 (also known as type 1 or oral) and HSV-2 (type 2 or genital), can establish lifelong latent infections within sensory ganglia. Periodically, the virus reactivates and can cause recurrent cold sores, eye and genital infections and encephalitis. One of the HSV-1/2 proteins involved in converting the cell into an efficient producer of viral gene products is the infected cell polypeptide 27 or ICP27. HSV-1/2 immediate-early protein ICP27 is a nuclear phosphoprotein that is required for viral growth during lytic infection. Analysis of viral mutants defective in this function has shown that ICP27 has a number of effects on gene expression including a contribution to the shut off of host protein synthesis, the stimulation of HSV-1/2 early gene expression and DNA replication, and the induction of late viral gene products. ICP27 performs these functions primarily posttranscriptionally at the level of RNA processing. ICP27 affects three important RNA processing events: polyadenylation, splicing and nuclear RNA export.

REFERENCES

1. Hardy, W.R. and Sandri-Goldin, R.M. 1994. Herpes simplex virus inhibits host cell splicing, and regulatory protein ICP27 is required for this effect. J. Virol. 68: 7790-7799.
2. Zvonarev, A.Iu., et al. 1994. The production of recombinant polypeptides from the herpes simplex viruses types 1 and 2. Vopr. Virusol. 39: 110-113.
3. Hibbard, M.K. and Sandri-Goldin, R.M. 1995. Arginine-rich regions succeeding the nuclear localization region of the HSV-1 regulatory protein ICP27 are required for efficient nuclear localization and late gene expression. J. Virol. 69: 4656-4667.
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5. Zhi, Y., et al. 1999. Self-interaction of the herpes simplex virus type 1 regulatory protein ICP27. Virology 257: 341-351.
6. Stingly, S.W., et al. 2000. Global analysis of herpes simplex virus type 1 transcription using an oligonucleotide-based DNA microarray. J. Virol. 74: 9916-9927.
7. Mikloska, Z., et al. 2000. Monophosphoryl lipid A and QS21 increase CD8 T lymphocyte cytotoxicity to herpes simplex virus-2 infected cell proteins 4 and 27 through IFN-γ and IL-12 production. J. Immunol. 164: 5167-5176.
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9. Braun, R.P., et al. 2006. Characterization of the IFN-γ T cell responses to immediate early antigens in humans with genital herpes. Virol. J. 3: 54.

SOURCE

HSV-1/2 ICP27 (H1142) is a mouse monoclonal antibody raised against herpes virus.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

HSV-1/2 ICP27 (H1142) is recommended for detection of ICP27 of HSV-1 and HSV-2 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-1/2 ICP27: 63 kDa.

SELECT PRODUCT CITATIONS

1. Li, J.M., et al. 2013. MicroRNA-145 regulates oncolytic herpes simplex virus-1 for selective killing of human non-small cell lung cancer cells. Virol. J. 10: 241.
2. Diner, B.A., et al. 2015. The functional interactome of PYHIN immune regulators reveals IFIX is a sensor of viral DNA. Mol. Syst. Biol. 11: 787.
3. Crow, M.S. and Cristea, I.M. 2017. Human antiviral protein IFIX suppresses viral gene expression during HSV-1 infection and is counteracted by virus-induced proteasomal degradation. Mol. Cell. Proteomics 16: S200-S214.
4. Agelidis, A., et al. 2021. Disruption of innate defense responses by endoglycosidase HPSE promotes cell survival. JCI Insight 6: 144255.
5. Orzalli, M.H., et al. 2021. Virus-mediated inactivation of anti-apoptotic Bcl-2 family members promotes Gasdermin-E-dependent pyroptosis in barrier epithelial cells. Immunity 54: 1447-1462.e5.
6. Miranda, M.D., et al. 2022. The role of pyrazolopyridine derivatives on different steps of herpes simplex virus type-1 *in vitro* replicative cycle. Int. J. Mol. Sci. 23: 8135.
7. Huang, P., et al. 2023. Metabolomics profiles reveal new insights of herpes simplex virus type 1 infection. Int. J. Mol. Sci. 24: 1521.

STORAGE

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

PROTOCOLS

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