

# HSV-1 ICP8 (11E2): sc-53330

## BACKGROUND

The herpes simplex virus (HSV) (also known as cold sore, night fever, or fever blister) is a virus that causes a contagious disease. The HSV1 strain generally appears in the orofacial organs. All herpes viruses are morphologically identical: they have a large double stranded DNA genome, and the virion consists of an icosahedral nucleocapsid which is surrounded by a lipid bilayer envelope. Following primary infection, the virus establishes a latent infection in the host and may reactivate at any stage. Reactivation is frequently, but not always, associated with further disease. ICP8, the HSV1 encoded single-strand DNA (ssDNA)-binding protein, is the major DNA binding protein of HSV1. ICP8 promotes single-stranded DNA to assemble into a homologous duplex plasmid producing a displacement loop. At higher concentrations, however, ICP8 facilitates the reverse reaction due to its helix destabilizing activity.

## REFERENCES

- Boehmer, P.E. 1998. The herpes simplex virus type-1 single-strand DNA-binding protein, ICP8, increases the processivity of the UL9 protein DNA helicase. *J. Biol. Chem.* 273: 2676-2683.
- White, E.J. and Boehmer, P.E. 1999. Photoaffinity labeling of the herpes simplex virus type-1 single-strand DNA-binding protein (ICP8) with oligodeoxyribonucleotides. *Biochem. Biophys. Res. Commun.* 264: 493-497.
- Gourves, A.S., et al. 2000. Equilibrium binding of single-stranded DNA with herpes simplex virus type I-coded single-stranded DNA-binding protein, ICP8. *J. Biol. Chem.* 275: 10864-10869.

## SOURCE

HSV1 ICP8 (11E2) is a mouse monoclonal antibody raised against ICP8 purified from U-35-VERO cells.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HSV-1 ICP8 (11E2) is available conjugated to agarose (sc-53330 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53330 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53330 PE), fluorescein (sc-53330 FITC), Alexa Fluor<sup>®</sup> 488 (sc-53330 AF488), Alexa Fluor<sup>®</sup> 546 (sc-53330 AF546), Alexa Fluor<sup>®</sup> 594 (sc-53330 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-53330 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-53330 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-53330 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

HSV-1 ICP8 (11E2) is recommended for detection of HSV1 ICP8 of herpes simplex virus origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Molecular Weight of HSV-1 ICP8: 150 kDa.

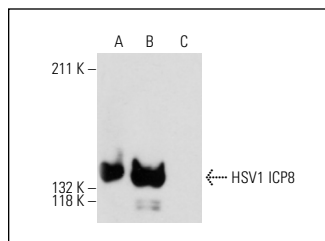
## RESEARCH USE

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.

## DATA



HSV1 ICP8 (11E2): sc-53330. Western blot analysis of HSV1 ICP8 expression in HSV-1 (MacIntyre strain) infected African Green monkey kidney (A), HSV-1 (117 syn + strain) infected baby hamster kidney (B) and mock infected control baby hamster kidney (C) tissue extracts.

## SELECT PRODUCT CITATIONS

- Turner, A.M., et al. 2014. Quantitative analysis of HSV gene expression during lytic infection. *Curr. Protoc. Microbiol.* 35: 14E.5.1-27.
- Workenhe, S.T., et al. 2015. Genome-wide lentiviral shRNA screen identifies serine/arginine-rich splicing factor 2 as a determinant of oncolytic virus activity in breast cancer cells. *Oncogene* 35: 2465-2474.
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- Kobayashi, K., et al. 2017. MiR-199a inhibits secondary envelopment of herpes simplex virus-1 through the downregulation of Cdc42-specific GTPase activating protein localized in Golgi apparatus. *Sci. Rep.* 7: 6650.
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- Adlakha, M., et al. 2019. The HSV-1 immediate early protein ICP22 is a functional mimic of a cellular J protein. *J. Virol.* 94: e01564-19.
- Ikeda, M., et al. 2020. UBE1a suppresses herpes simplex virus-1 replication. *Viruses* 12: E1391.
- Qin, S., et al. 2021. Hsp90 inhibitors prevent HSV-1 replication by directly targeting UL42-Hsp90 complex. *Front. Microbiol.* 12: 797279.
- Ly, C.Y., et al. 2023. Inhibitors of one or more cellular aurora kinases impair the replication of herpes simplex virus 1 and other DNA and RNA viruses with diverse genomes and life cycles. *Microbiol. Spectr.* 11: e0194322.

## PROTOCOLS

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