



HTLV-1 gp46 (1C11): sc-53890

BACKGROUND

Human T-lymphotropic virus (HTLV) is a single-stranded RNA retrovirus that causes T cell leukemia and T cell lymphoma in human adults and may be involved in a few demyelinating diseases. HTLV-1 is a member of the HTLV family that is associated with several kinds of diseases, including HTLV-1-associated myelopathy, infection with *Strongyloides stercoralis* and a virus cancer link to leukemia. HTLV-1 transmission probably occurs via sexual contact, childbirth and exposure to contaminated blood. HTLV-1 gp46 is a surface glycoprotein located on the viral envelope that is important in the immune-response of the host to the virus. HTLV-1 gp46 interacts with heat shock cognate protein (HSC 70) in a mechanism that may lead to pore formation in lipid bilayers, followed by membrane fusion or cell death.

REFERENCES

1. Arp, J., et al. 1996. A source of glycosylated human T cell lymphotropic virus type 1 envelope protein: expression of gp46 by the Vaccinia Virus/T7 polymerase system. *J. Virol.* 70: 7349-7359.
2. Cao, F., et al. 2000. Nucleotide sequence analyses of partial envelope gp46 gene of human T-lymphotropic virus type 1 from inhabitants of Fujian Province in Southeast China. *AIDS Res. Hum. Retroviruses* 16: 921-923.
3. Sagara, Y., et al. 2000. HTLV type 1 envelope glycoprotein gp46 evokes necrosis by binding to receptor complex. *AIDS Res. Hum. Retroviruses* 16: 1701-1704.
4. Hernández Marin, M., et al. 2001. Chimeric synthetic peptides containing two immunodominant epitopes from the envelope gp46 and the transmembrane gp21 glycoproteins of HTLV-1 virus. *Biochem. Biophys. Res. Commun.* 289: 1-6.
5. Hernández Marin, M., et al. 2001. Chimeric synthetic peptides from the envelope gp46 and the transmembrane gp21 glycoproteins for the detection of antibodies to human T cell leukemia virus type II. *Biochem. Biophys. Res. Commun.* 289: 7-12.
6. Hadlock, K.G., et al. 2002. Epitope mapping of human monoclonal antibodies recognizing conformational epitopes within HTLV type 1 gp46, employing HTLV type 1/2 envelope chimeras. *AIDS Res. Hum. Retroviruses* 18: 57-70.
7. Piñon, J.D., et al. 2003. Human T-cell leukemia virus type 1 envelope glycoprotein gp46 interacts with cell surface heparan sulfate proteoglycans. *J. Virol.* 77: 9922-9930.
8. Sundaram, R., et al. 2004. Structural and immunogenicity analysis of chimeric B cell epitope constructs derived from the gp46 and gp21 subunits of the envelope glycoproteins of HTLV-1. *J. Pept. Res.* 63: 132-140.

SOURCE

HTLV-1 gp46 (1C11) is a mouse monoclonal antibody raised against HTLV-I gp46.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HTLV-1 gp46 (1C11) is available conjugated to agarose (sc-53890 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53890 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53890 PE), fluorescein (sc-53890 FITC), Alexa Fluor® 488 (sc-53890 AF488), Alexa Fluor® 546 (sc-53890 AF546), Alexa Fluor® 594 (sc-53890 AF594) or Alexa Fluor® 647 (sc-53890 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53890 AF680) or Alexa Fluor® 790 (sc-53890 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HTLV-1 gp46 (1C11) is recommended for detection of HTLV-1 gp46 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 HTLV-1 gp46: 44 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. Polakowski, N., et al. 2023. HBZ upregulates myoferlin expression to facilitate HTLV-1 infection. *PLoS Pathog.* 19: e1011202.

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.