



# HTLV-1 gp46 (65/6C2.2.34): sc-57865

## 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 through exposure to contaminated blood. HTLV-1 gp46 is a surface glycoprotein located on the viral envelope that is important in the immuno-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 to be 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 (65/6C2.2.34) is a mouse monoclonal antibody raised against amino acids 210-306 encoded by the viral env gene.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HTLV-1 gp46 (65/6C2.2.34) 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); may cross-react with the surface protein of HTLV-2 (MoT).

Molecular Weight of HTLV-1 gp46: 44 kDa.

## SELECT PRODUCT CITATIONS

1. Martins, C.P., et al. 2014. A reduction of viral mRNA, proteins and induction of altered morphogenesis reveals the anti-HTLV-1 activity of the labdane-diterpene myriadenolide *in vitro*. *BMC Microbiol.* 14: 331.
2. Polakowski, N., et al. 2023. HBZ upregulates myoferlin expression to facilitate HTLV-1 infection. *PLoS Pathog.* 19: e1011202.
3. Kendle, W., et al. 2023. Upregulation of neuropilin-1 inhibits HTLV-1 infection. *Pathogens* 12: 831.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.