# HTLV-2 gp46 (73/4.9.8): sc-57874



The Power to Question

### **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-2 shares approximately 70% genomic homology with HTLV-1 and is associated with several cases of myelopathy/tropical spastic paraparesis (HAM/TSP)-like neurological disease. HTLV-2 gp46 is a surface glycoprotein located on the viral envelope that is important in the immuno-response of the host to the virus. HTLV-2 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**

- Horal, P., Hall, W.W., Svennerholm, B., Lycke, J., Jeansson, S., Rymo, L., Kaplan, M.H. and Vahlne, A. 1991. Identification of type-specific linear epitopes in the gp21 of human T cell leukemia viruses type 1 and type 2 using synthetic peptides. Proc. Natl. Acad. Sci. USA 88: 5754-5758.
- Kawamura, N. 1995. Production of HTLV-2 env protein and its suppressive effect on infection. Hokkaido Igaku Zasshi 70: 635-647.
- 3. Ohara, N., Hayashi, K., Miyamoto, K., Takahashi, K., Ohtsuki, Y. and Akagi, T. 1995. Immunoelectron microscopic study of HTLV-2-producing cells with an anti-envelope gp46 monoclonal antibody. Arch. Virol. 140: 1291-1295.
- 4. Martin, T.C. and Southern, P.J. 1996. Infection and cellular activation by human T cell leukemia viruses, types 1 and 2. Virology 221: 375-381.
- Hadlock, K.G., Rowe, J., Perkins, S., Bradshaw, P., Song, G.Y., Cheng, C., Yang, J., Gascon, R., Halmos, J., Rehman, S.M., McGrath, M.S. and Foung, S.K. 1997. Neutral T cell lymphotropic virus type 1 and 2 gp46. J. Virol. 71: 5828-5840.
- 6. Hernández Marin, M., Castellanos Pentón, P., Márquez Bocalandro, Y., Pozo Peña, L., Díaz Navarro, J. and González López, L.J. 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 2. Biochem. Biophys. Res. Commun. 289: 7-12.
- 7. Hadlock, K.G., Yang, Q., Rowe, J. and Foung, S.K. 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.
- 8. Hasegawa, H., Tatsumi, M., Ogawa-Goto, K., Takahashi, H., Kojima, A., Iwasaki, T., Kurata, T., Sata, T., Takeuchi, T., Sheehy, N., Nagashima, K., Sawa, H. and Hall, W.W. 2002. Processing of the HTLV-2 envelope precursor glycoprotein gp63 by Furin is essential for cell fusion activity. AIDS Res. Hum. Retroviruses 18: 1253-1260.
- 9. Calattini, S., Chevalier, S.A., Duprez, R., Bassot, S., Froment, A., Mahieux, R. and Gessain, A. 2005. Discovery of a new human T cell lymphotropic virus (HTLV-3) in Central Africa. Retrovirology 2: 30.

#### **SOURCE**

HTLV-2 gp46 (73/4.9.8) is a mouse monoclonal antibody raised against HTLV-2 gp46.

### **PRODUCT**

Each vial contains 100  $\mu g$   $lgG_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### **APPLICATIONS**

HTLV-2 gp46 (73/4.9.8) is recommended for detection of HTLV-2 gp46 of HTLV-2 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 cross-react with the surface protein of HTLV-I.

Molecular Weight of HTLV-2 gp46: 45 kDa.

### **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 for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com