



HTLV-1 gp21 (vC-17): sc-17492

BACKGROUND

HTLV-1 causes two distinct human diseases, HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP) and adult T cell leukemia/lymphoma (ATL). The glycoproteins encoded by the ENV gene of HTLV-1 are essential for interaction with an unidentified receptor on the surface of target cells and play a crucial role in the infection process. The HTLV-1 Env proteins are initially synthesized in infected cells as a precursor protein (Pr61), which is subsequently glycosylated and cleaved in the Golgi apparatus into two mature products: the extracellular surface glycoprotein (gp46) and the transmembrane glycoprotein (gp21), which spans the lipid bilayers. The Env glycoproteins govern the entry of the virus into target cells by mediating specific attachment to a cellular receptor, which is followed by fusion between viral and cellular membranes. The HTLV-1 envelope (env) glycoprotein gp21 is a crucial target antigen in HAM/TSP and strongly inhibits infection of cell-free HTLV-1. The surface envelope glycoprotein gp46 of HTLV-1 elicits a strong immune response and plays a protective role against HTLV-1 infection in animal models.

REFERENCES

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2. Rosenberg, A., Delamarre, L., Preira, A. and Dokhelar, M. 1998. Analysis of functional conservation in the surface and transmembrane glycoprotein subunits of human T-cell leukemia virus 1 (HTLV-1) and HTLV-2. *J. Virol.* 9: 7609-7614.
3. Jinno, A., Haraguchi, Y., Shiraki, H. and Hoshino, H. 1999. Inhibition of cell-free human T-cell leukemia virus type 1 infection at a postbinding step by the synthetic peptide derived from an ectodomain of the gp21 transmembrane glycoprotein. *J. Virol.* 11: 9683-9689.
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5. Tallet, B., Astier-Gin, T., Moynet, D., Londos-Gagliardi, D. and Guillemain, B. 2001. Sequence variations in the amino- and carboxy-terminal parts of the surface envelope glycoprotein of HTLV type 1 induce specific neutralizing antibodies. *AIDS Res. Hum. Retroviruses* 4: 337-348.

SOURCE

HTLV-1 gp21 (vC-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HTLV-1 gp21.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-17492 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HTLV-1 gp21 (vC-17) is recommended for detection of envelope polyprotein gp21 of HTLV-1 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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

PROTOCOLS

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