

HIV-1 p17 (17-2): sc-69724

BACKGROUND

Human immunodeficiency virus (HIV) is a retrovirus that causes acquired immune deficiency syndrome (AIDS), a condition in humans in which the immune system begins to fail, leading to life-threatening opportunistic infections. HIV mainly infects vital cells in the human immune system such as helper T cells (specifically CD4⁺ T cells), macrophages and dendritic cells. Two species of HIV infect humans: HIV-1 and HIV-2, with HIV-1 being the more virulent strain. p17 is a structural matrix protein of HIV-1 that enters the nucleus shortly after viral synthesis. p17 may transfer viral nucleocapsids from the nuclei to plasma membranes, the location of viral assembly. p17 may also play a role in HIV-1 pathogenesis, since anti-p17 antibodies are used as a serological marker of disease progression, thereby implicating the protein for therapeutic HIV-1 immunizations.

REFERENCES

1. Boucher, C.A., Krone, W.J., Goudsmit, J., Melen, R.H., Naylor, P.H., Goldstein, A.L., Sun, D.K. and Sarin, P.S. 1990. Immune response and epitope mapping of a candidate HIV-1 p17 vaccine HGP30. *J. Clin. Lab. Anal.* 4: 43-47.
2. Jiang, J.D., Chu, F.N., Naylor, P.H., Kirkley, J.E., Mandeli, J., Wallace, J.I., Sarin, P.S., Goldstein, A.L., Holland, J.F. and Bekesi, J.G. 1992. Specific antibody responses to synthetic peptides of HIV-1 p17 correlate with different stages of HIV-1 infection. *J. Acquir. Immune Defic. Syndr.* 5: 382-390.
3. Graham, S., Follett, E.A., Wallace, L., Desselberger, U. and Marsden, H.S. 1992. Immunodominant epitopes of HIV-1 p17 and p24. *AIDS Res. Hum. Retroviruses* 8: 1781-1788.
4. Bukrinskaia, A.G., Vorkunova, G.K. and Tentsov, Lulu. 1993. HIV-1 p17 matrix protein is transported into the cell nucleus and binds with genomic viral RNA. *Mol. Biol.* 27: 49-57.
5. Chargelegue, D., O'Toole, C.M. and Colvin, B.T. 1993. A longitudinal study of the in HIV-1⁺ patients with haemophilia: titre and avidity. *Clin. Exp. Immunol.* 93: 331-336.
6. Sarin, P.S., Mora, C.A., Naylor, P.H., Markham, R., Schwartz, D., Kahn, J., Heseltine, P., Gazzard, B., Youle, M. and Rios, A. 1995. HIV-1 p17 synthetic peptide vaccine HGP-30: induction of immune response in human subjects and preliminary evidence of protection against HIV challenge in SCID mice. *Cell. Mol. Biol.* 41: 401-407.
7. Kato, T., Suzuki, J., Daimon, M., Sasaki, H. and Ishikawa, K. 1997. Antibodies to the HIV-1 p17 protein cross-react with human superoxide dismutase-2. *Biochem. Biophys. Res. Commun.* 230: 184-187.
8. Birk, M., Flock, J.I., Sönnnerborg, A. and Sällberg, M. 1998. Coexisting members of HIV-1 p17 gene quasispecies represent proteins with distinct antigenicity and immunogenicity. *AIDS* 12: 1973-1981.
9. Fiorentini, S., Marini, E., Bozzo, L., Trainini, L., Saadoun, L., Avolio, M., Pontillo, A., Bonfanti, C., Sarmientos, P. and Caruso, A. 2004. Preclinical studies on immunogenicity of the HIV-1 p17-based synthetic peptide AT20-KLH. *Biopolymers* 76: 334-343.

SOURCE

HIV-1 p17 (17-2) is a mouse monoclonal antibody raised against HIV-1 p17 Gag.

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.

APPLICATIONS

HIV-1 p17 (17-2) is recommended for detection of Gag p17 of HIV-1 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of HIV-1 p17: 17 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.

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.