

HIV-1 p24 (1027): sc-69658

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. p24 is a viral protein encoded by the HIV-1 GAG gene that provides structural elements of the virus along with p6, p7 and p17. Specifically, p24 makes up the viral capsid, p6 and p7 are the components of the nucleocapsid, and p17 provides a protective matrix.

REFERENCES

1. Barbouche, R.M., Bürgisser, P., Slim, A., Lagueche, B. and Dellagi, K. 2003. False-positive HIV-1 p24 antigenemia with unusual pattern of neutralization. *Arch. Inst. Pasteur. Tunis* 76: 11-12.
2. Barletta, J.M., Edelman, D.C. and Constantine, N.T. 2004. Lowering the detection limits of HIV-1 viral load using real-time immuno-PCR for HIV-1 p24 antigen. *Am. J. Clin. Pathol.* 122: 20-27.
3. Hou, J., Hu, Y., Zhu, L., Shen, H.H., Yang, J.Y., Hong, S.W. and Mao, P.Y. 2004. Preparation and characterization of the monoclonal antibody against HIV-1 p24 antigen. *Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi* 20: 699-701.
4. Coleman, J.K., Pu, R., Martin, M., Sato, E. and Yamamoto, J.K. 2005. HIV-1 p24 vaccine protects cats against feline immunodeficiency virus infection. *AIDS* 19: 1457-1466.
5. Kran, A.M., Sommerfelt, M.A., Sørensen, B., Nyhus, J., Baksaas, I., Bruun, J.N. and Kvale, D. 2005. Reduced viral burden amongst high responder patients following HIV-1 p24 peptide-based therapeutic immunization. *Vaccine* 23: 4011-4015.
6. Lottersberger, J., Salvetti, J.L., Beltrami, L.M. and Tonarelli, G. 2005. Antibody recognition of synthetic peptides mimicking immunodominant regions of HIV-1 p24 and p17 proteins. *Rev. Argent. Microbiol.* 36: 151-157.
7. Schupbach, J., Günthard, H., Joos, B., Fischer, M., Böni, J., Tomasik, Z., Yerly, S., Perrin, L., Battegay, M., Furrer, H., Vernazza, P., Bernasconi, E., Hirschel, B. and Swiss HIV Cohort Study. 2005. HIV-1 p24 may persist during long-term highly active antiretroviral therapy, increases little during short treatment breaks, and its rebound after treatment stop correlates with CD4⁺ T cell loss. *J. Acquir. Immune Defic. Syndr.* 40: 250-256.
8. Knuchel, M.C., Tomasik, Z., Speck, R.F., Lüthy, R. and Schüpbach, J. 2006. Ultrasensitive quantitative HIV-1 p24 antigen assay adapted to dried plasma spots to improve treatment monitoring in low-resource settings. *J. Clin. Virol.* 36: 64-67.
9. Voltersvik, P., Bostad, L., Dyrhol-Riise, A.M., Eide, G.E., Rosok, B.I., Olofsson, J. and Asjö, B. 2006. Cystatin A and HIV-1 p24 antigen expression in tonsillar lymphoid follicles during HIV-1 infection and during highly active antiretroviral therapy. *J. Acquir. Immune Defic. Syndr.* 41: 277-278.

RESEARCH USE

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

SOURCE

HIV-1 p24 (1027) is a mouse monoclonal antibody raised against purified recombinant HIV-1 p24.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HIV-1 p24 (1027) is recommended for detection of Gag p24 of HIV-1 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000); non cross-reactive with HIV-1 gp41 and HIV-2 gp36.

Molecular Weight of HIV-1 p24: 24 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, TBS Blotto A Blocking Reagent: sc-2333 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.

PROTOCOLS

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



See **HIV-1 p24 (24-4): sc-69728** for HIV-1 p24 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.