

# HIV-1 p24 (05-001): sc-65918

## 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<sup>+</sup> 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., Largueche, 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. Schüpbach, 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; 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<sup>+</sup> 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: 277-2784.

## RESEARCH USE

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

## SOURCE

HIV-1 p24 (05-001) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 48-62 of p24 of HIV-1 origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HIV-1 p24 (05-001) is recommended for detection of Gag p24 of HIV-1 origin and Nef of HIV-1 subtypes A, B and C origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of HIV-1 p24: 24 kDa.

## SELECT PRODUCT CITATIONS

1. Deodhar, S., Sillman, B., Bade, A.N., Avedissian, S.N., Podany, A.T., McMillan, J.M., Gautam, N., Hanson, B., Dyavar Shetty, B.L., Szlachetka, A., Johnston, M., Thurman, M., Munt, D.J., et al. 2022. Transformation of dolutegravir into an ultra-long-acting parenteral prodrug formulation. *Nat. Commun.* 13: 3226.

## 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](http://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, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.