

# HIV-1 p17 (17-3): sc-69725

## 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. 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., et al. 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., et al. 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., et al. 1992. Immunodominant epitopes of HIV-1 p17 and p24. *AIDS Res. Hum. Retroviruses* 8: 1781-1788.
4. Bukrinskaia, A.G., et al. 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., et al. 1993. A longitudinal study of the in HIV-1<sup>+</sup> patients with haemophilia: titre and avidity. *Clin. Exp. Immunol.* 93: 331-336.
6. Sarin, P.S., et al. 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., et al. 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., et al. 1998. Coexisting members of HIV-1 p17 gene quasispecies represent proteins with distinct antigenicity and immunogenicity. *AIDS* 12: 1973-1981.
9. Fiorentini, S., et al. 2004. Preclinical studies on immunogenicity of the HIV-1 p17-based synthetic peptide AT20-KLH. *Biopolymers* 76: 334-343.

## SOURCE

HIV-1 p17 (17-3) is a mouse monoclonal antibody raised against HIV-1 p17 Gag.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HIV-1 p17 (17-3) is available conjugated to either phycoerythrin (sc-69725 PE) or fluorescein (sc-69725 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

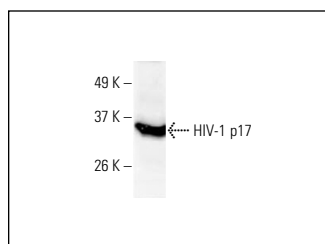
HIV-1 p17 (17-3) is recommended for detection of Gag p17 of HIV-1 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



HIV-1 p17 (17-3): sc-69725. Western blot analysis of HIV-1 p17 expression in semi-purified HIV-1 virions.

## SELECT PRODUCT CITATIONS

1. Henrick, B.M., et al. 2015. HIV-1 structural proteins serve as PAMPs for TLR2 heterodimers significantly increasing infection and innate immune activation. *Front. Immunol.* 6: 426.
2. Sharma, A.L., et al. 2022. Cocaine sensitizes the CD4<sup>+</sup> T cells for HIV infection by co-stimulating NFAT and AP-1. *iScience* 25: 105651.

## 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](http://www.scbt.com) for detailed protocols and support products.