

# HIV-1 Rev (Rev-6): sc-69730

## 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 rapidly after viral synthesis. HIV-1 Rev is an RNA-binding, transactivator protein that is readily phosphorylated at separate regions by protein kinase CK2 and MAP kinase. Rev plays a role in viral replication, and it specifically induces the accumulation in the cytoplasm of intron-containing mRNAs normally kept in the nucleus.

## REFERENCES

1. Boucher, C.A., et al. 1990. Immune response and epitope mapping of a candidate HIV-1 p17 vaccine HGP-30. *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. 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.
4. Chargelegue, D., et al. 1993. A longitudinal study of the IgG antibody response to HIV-1 p17 gag protein in HIV-1<sup>+</sup> patients with haemophilia: titre and avidity. *Clin. Exp. Immunol.* 93: 331-336.
5. Graham, S., et al. 1993. Immunodominant epitopes of HIV-1 p17 and p24. *AIDS Res. Hum. Retroviruses* 8: 1781-1788.
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. Chen, Y.H., et al. 1998. Antigenic characterization of HIV-1 gp41 binding proteins. *Immunol. Lett.* 62: 75-79.
9. Gallo, S.A., et al. 2001. HIV-1 gp41 six-helix bundle formation occurs rapidly after the engagement of gp120 by CXCR-4 in the HIV-1 Env-mediated fusion process. *Biochemistry* 40: 12231-12236.

## SOURCE

HIV-1 Rev (Rev-6) is a mouse monoclonal antibody raised against HIV-1 Rev.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

HIV-1 Rev (Rev-6) is recommended for detection of Rev 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of HIV-1 Rev: 18 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.

## SELECT PRODUCT CITATIONS

1. Stornaiuolo, A., et al. 2013. RD2-MolPack-Chim3, a packaging cell line for stable production of lentiviral vectors for anti-HIV gene therapy. *Hum. Gene Ther. Methods* 24: 228-240.
2. Arter, J. and Wegner, M. 2015. Transcription factors Sox10 and Sox2 functionally interact with positive transcription elongation factor b in Schwann cells. *J. Neurochem.* 132: 384-393.
3. Marin, V., et al. 2016. RD-MolPack technology for the constitutive production of self-inactivating lentiviral vectors pseudotyped with the nontoxic RD114-TR envelope. *Mol. Ther. Methods Clin. Dev.* 3: 16033.

## 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.