SANTA CRUZ BIOTECHNOLOGY, INC.

# HIV-1 Vif (319): sc-69731

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Viral infectivity factor (Vif) is a nonstructural HIV-1 protein that acts during virus assembly by an unknown mechanism, enhancing viral infectivity. Inhibiting HIV-1 Vif by intrabody expression produces viral particles that do not complete reverse transcription. Recent studies suggest that HIV-1 Vif enhances infectivity by overcoming an inhibitory factor present in non-permissive cells. HIV-1 Vif interacts with $G_{\alpha\gamma}$, viral protease, HP68, spermine, Triad 3 and RNA. HIV-1 Vif exists as a soluble cytoplasmic form and as a membrane bound form that tightly associates with the cytoplasmic side of cellular membranes. HIV-1 Vif is a protein that can form multimers that accumulate in the cytoplasm of HIV-1 infected cells.

## REFERENCES


1. Goncalves, J., Jallepalli, P. and Gabuzda, D.H. 1994. Subcellular localization of the Vif protein of human immunodeficiency virus type 1. J. Virol. 68: 704-712.
2. Goncalves, J., Shi, B., Yang, X. and Gabuzda, D. 1995. Biological activity of human immunodeficiency virus type 1 Vif requires membrane targeting by C-terminal basic domains. J. Virol. 69: 7196-7204.
3. Yang, S., Sun, Y. and Zhang, H. 2001. The multimerization of human immunodeficiency virus type I Vif protein: a requirement for Vif function in the viral life cycle. J. Biol. Chem. 276: 4889-4893.
4. Goncalves, J., Silva, F., Freitas-Vieira, A., Santa-Marta, M., Malho, R., Yang, X., Gabuzda, D. and Barbas, C. III. 2002. Functional neutralization of HIV-1 Vif protein by intracellular immunization inhibits reverse transcription and viral replication. J. Biol. Chem. 277: 32036-32045.
5. Lake, J., Carr, J., Feng, F., Mundy, L., Burrell, C. and Li, P. 2004. The role of Vif during HIV-1 infection: interaction with novel host cellular factors. J. Clin. Virol. 26: 143-152.


## SOURCE

HIV-1 Vif (319) is a mouse monoclonal antibody raised against HIV-1 Vif.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HIV-1 Vif (319) is available conjugated to agarose (sc-69731 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-69731 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69731 PE), fluorescein (sc-69731 FITC), Alexa Fluor® 488 (sc-69731 AF488), Alexa Fluor® 546 (sc-69731 AF546), Alexa Fluor® 594 (sc-69731 AF594) or Alexa Fluor® 647 (sc-69731 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-69731 AF680) or Alexa Fluor® 790 (sc-69731 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

HIV-1 Vif (319) is recommended for detection of Vif of HIV-1 by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

## 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) 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. Valera, M.S., de Armas-Rillo, L., Barroso-González, J., Ziglio, S., Batisse, J., Dubois, N., Marrero-Hernández, S., Borel, S., García-Expósito, L., Biard-Piechaczyk, M., Paillart, J.C. and Valenzuela-Fernández, A. 2015. The HDAC6/APOBEC3G complex regulates HIV-1 infectiveness by inducing Vif autophagic degradation. Retrovirology 12: 53.
2. Augustine, T., Chaudhary, P., Gupta, K., Islam, S., Ghosh, P., Santra, M.K. and Mitra, D. 2017. Cyclin F/FBXO1 interacts with HIV-1 viral infectivity factor (Vif) and restricts progeny virion infectivity by ubiquitination and proteasomal degradation of Vif protein through $SCF^{cyclin\ F}$ E3 ligase machinery. J. Biol. Chem. 292: 5349-5363.
3. Evans, E.L., Becker, J.T., Fricke, S.L., Patel, K. and Sherer, N.M. 2018. HIV-1 Vif's capacity to manipulate the cell cycle is species specific. J. Virol. 92: e02102-17.
4. Marrero-Hernández, S., Márquez-Arce, D., Cabrera-Rodríguez, R., Estévez-Herrera, J., Pérez-Yanes, S., Barroso-González, J., Madrid, R., Machado, J.D., Blanco, J. and Valenzuela-Fernández, A. 2019. HIV-1 Nef targets HDAC6 to assure viral production and virus infection. Front. Microbiol. 10: 2437.
5. Ali, A., Kumar, V. and Banerjea, A.C. 2021. STUB1/CHIP promotes ubiquitination and degradation of HIV-1 Vif to restore the cellular level of APOBEC3G protein. Biochem. Biophys. Res. Commun. 574: 27-32.


## 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.