SANTA CRUZ BIOTECHNOLOGY, INC.

HIV-1 Gag (vN-17): sc-17484

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Infection by human immunodeficiency virus (HIV) is associated with an early immune dysfunction and progressive destruction of $CD4^+$ T lymphocytes. The HIV-induced, premature destruction of lymphocytes is associated with the continuous production of HIV viral proteins, which modulate apoptotic pathways. HIV-1 assembly is initially driven by polymerization of the Gag polyprotein, which forms a spherical shell associated with the inner membrane of the budding particle. The three major regions of Gag all perform essential roles in viral assembly: the NH2-terminal MA (matrix) region binds the membrane, the central CA (capsid) region mediates important Gag-Gag interactions, and the COOH-terminal NC (nucleocapsid) region packages the viral RNA genome. As the particle assembles, the viral protease cleaves Gag, producing discrete MA, CA and NC proteins, which subsequently rearrange to form the mature, infectious viral particle. During maturation, MA remains associated with the inner viral membrane, while CA and NC condense about the viral RNA to form an unusual conical structure at the center of the virus (the "core").

REFERENCES

1. Ganser, B.K., Li, S., Klishko, V.Y. and Sundquist, W.I. 1999. Assembly and analysis of conical models for the HIV-1 core. JAMA 283: 80-83.
2. Ross, T.M. 2001. Using death to one's advantage: HIV modulation of apoptosis. Leukemia 3: 332-341.
3. Morikawa, Y., Kinoshita, A., Goto, T., Tomoda, H. and Sano, K. 2001. Membrane relocation but not tight binding of human immunodeficiency virus type 1 Gag particles myristoylated in Escherichia coli. Virology 2: 343-352.
4. Zhang, Y., Huber, M., Weissbrich, B., Voss, G., Langmann, P., Klinker, H. and Jassoy, C. 2001. Characterization of HIV-specific proliferative T cell responses in HIV-infected persons. AIDS Res. Hum. Retroviruses 7: 623-629.
5. Funk, G.A., Fischer, M., Joos, B., Opravil, M., Gunthard, H.F., Ledergerber, B. and Bonhoeffer, S. 2001. Quantification of *in vivo* replicative capacity of HIV-1 in different compartments of infected cells. J. Acquir. Immune Defic. Syndr. 5: 397-404.

SOURCE

HIV-1 Gag (vN-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HIV-1 Gag.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17484 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 Gag (vN-17) is recommended for detection of Gag of HIV-1 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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

PROTOCOLS

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