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. The HIV-1 Tat protein, also designated Tbp1, is a viral protein that is essential for activation of the HIV genes and plays a critical role in HIV-induced immunodeficiency. Extracellular HIV-1 Tat has been implicated in the development of AIDS and of AIDS-associated pathologies. HIV-1 Tat is associated with chronic immune activation and the continuous induction of apoptotic factors. It can also protect HIV-infected cells from apoptosis by increasing anti-apoptotic proteins and downregulating cell surface receptors recognized by immune system cells. HIV-1 Tat has been shown to have neurotoxic activity and is able to promote certain proinflammatory functions of microglia.

REFERENCES

SOURCE
HIV-1 Tat (42A10) is a mouse monoclonal antibody raised against Tat protein of HIV-1 origin.

PRODUCT
Each vial contains 200 µg IgG\(_{2a}\) in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS
HIV-1 Tat (42A10) is recommended for detection of Tat of HIV-1 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)].

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

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 or our catalog for detailed protocols and support products.

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