SANTA CRUZ BIOTECHNOLOGY, INC.

CA150 (5): sc-135852

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Maximal human immunodeficiency virus type 1 (HIV-1) gene expression requires specific cellular factors in addition to the virus-encoded transactivator protein Tat and the RNA element TAR. The nuclear protein CA150 (also designated p144 in mouse and rat) is a component of the human RNA polymerase II holoenzyme complex that is involved in Tat-dependent HIV-1 transcriptional activation. CA150 affects elongation of transcription complexes assembled on the HIV-1 promoter in a TATA-box-dependent manner. In addition to its role in the regulation of Tat-activated HIV-1 gene expression, CA150 may also play a role in the regulation of cellular transcriptional processes. CA150 exists as a 1,034 amino acid long form, which contains a leucine-zipper-like motif, and a 970 amino acid short form, which lacks this motif. These two forms, designated CA150a and CA150b, respectively, are produced by alternative splicing.

REFERENCES

1. Sune, C., et al. 1995. Transcriptional transactivation by human immunodeficiency virus type 1 Tat requires specific co-activators that are not basal factors. J. Virol. 69: 3098-3107.
2. Sune, C., et al. 1997. CA150, a nuclear protein associated with the RNA polymerase II holoenzyme, is involved in Tat-activated human immunodeficiency virus type 1 transcription. Mol. Cell. Biol. 17: 6029-6039.
3. Shimada, M., et al. 1999. Molecular cloning and splicing isoforms of mouse p144, a homologue of CA150. J. Biochem. 126: 1033-1042.
4. Sune, C., et al. 1999. Transcriptional cofactor CA150 regulates RNA polymerase II elongation in a TATA-box-dependent manner. Mol. Cell. Biol. 19: 4719-4728.
5. Ferguson, N., et al. 2006. General structural motifs of amyloid protofilaments. Proc. Natl. Acad. Sci. USA 103: 16248-16253.
6. DeMarco, R., et al. 2006. Gender biased differential alternative splicing patterns of the transcriptional cofactor CA150 gene in *Schistosoma mansoni*. Mol. Biochem. Parasitol. 150: 123-131.
7. Andresen, J.M., et al. 2007. Replication of twelve association studies for Huntington's disease residual age of onset in large Venezuelan kindreds. J. Med. Genet. 44: 44-50.
8. Cheng, D., et al. 2007. The arginine methyltransferase CARM1 regulates the coupling of transcription and mRNA processing. Mol. Cell 25: 71-83.

CHROMOSOMAL LOCATION

Genetic locus: TCERG1 (human) mapping to 5q32; Tcerg1 (mouse) mapping to 18 B3.

SOURCE

CA150 (5) is a mouse monoclonal antibody raised against amino acids 568-678 of CA150 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CA150 (5) is recommended for detection of CA150 of mouse, rat and human 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).

Suitable for use as control antibody for CA150 siRNA (h): sc-37728, CA150 siRNA (m): sc-37729, CA150 shRNA Plasmid (h): sc-37728-SH, CA150 shRNA Plasmid (m): sc-37729-SH, CA150 shRNA (h) Lentiviral Particles: sc-37728-V and CA150 shRNA (m) Lentiviral Particles: sc-37729-V.

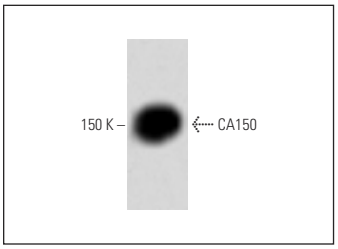
Molecular Weight of CA150: 150 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or HT-1080 whole cell lysate.

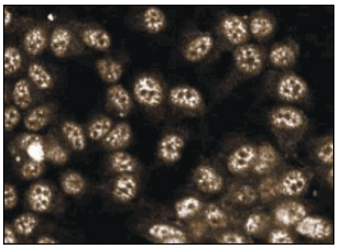
RECOMMENDED SUPPORT REAGENTS

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



CA150 (5): sc-135852. Western blot analysis of CA150 expression in Jurkat whole cell lysate.



CA150 (5): sc-135852. Immunofluorescence staining of HeLa cells showing nuclear localization.

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. Not for resale.

PROTOCOLS

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