

CA150 (TCEAD79A): sc-81210

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

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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 (TCEAD79A) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of CA150 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% BSA.

APPLICATIONS

CA150 (TCEAD79A) is recommended for detection of CA150a and CA150b 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.

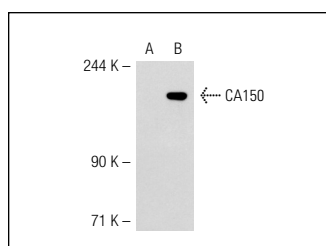
Molecular Weight of CA150: 150 kDa.

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

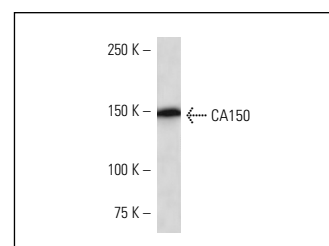
RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CA150 (TCEAD79A): sc-81210. Western blot analysis of CA150 expression in non-transfected: sc-117752 (A) and mouse CA150 transfected: sc-118943 (B) 293T whole cell lysates.



CA150 (TCEAD79A): sc-81210. Western Blot analysis of CA150 expression in F2408 whole cell lysate.

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.