SANTA CRUZ BIOTECHNOLOGY, INC.

Srb7 (31-C): sc-101186

BACKGROUND

In mammalian cells, transcription is regulated in part by high molecular weight coactivating complexes that mediate signals between transcriptional activators and RNA polymerase. These complexes include the SMCC (SRB and MED protein cofactor complex), which consists of various subunits that share homology with several components of the yeast transcriptional mediator complexes and including the human proteins Srb7, Med6 (also designated DRIP33) and Med7 (also designated DRIP34). SMCC associates with the RNAPII (RNA polymerase II) holoenzyme through Srb7 and, in turn, enhances gene-specific activation or repression induced by DNA-binding transcription factors. Med6 and Med7, as well as other components of SMCC, associate with co-activator proteins from the TRAP (thyroid hormone receptor-activating protein) complex and DRIP (for vitamin D receptor interacting protein) complex to facilitate steroid receptor dependent transcriptional activation. Additionally, SMCC associates with PC4 (positive cofactor 4) to repress basal transcription independent of RNAPII activity.

REFERENCES

1. Malik, S., et al. 1998. A dynamic model for PC4 coactivator function in RNA polymerase II transcription. Proc. Natl. Acad. Sci. USA 95: 2192-2197.
2. Jiang, Y.W., et al. 1998. Mammalian mediator of transcriptional regulation and its possible role as an end-point of signal transduction pathways. Proc. Natl. Acad. Sci. USA 95: 8538-8543.
3. Gu, W., et al. 1999. A novel human SRB/MED-containing cofactor complex, SMCC, involved in transcription regulation. Mol. Cell 3: 97-108.
4. Xiao, H., et al. 1999. The human homologue of *Drosophila* TRF-proximal protein is associated with an RNA polymerase II-SRB complex. J. Biol. Chem. 274: 3937-3940.
5. Ito, M., et al. 1999. Identity between TRAP and SMCC complexes indicates novel pathways for the function of nuclear receptors and diverse mammalian activators. Mol. Cell 3: 361-370.
6. Rachez, C., et al. 1999. Ligand-dependent transcription activation by nuclear receptors requires the DRIP complex. Nature 398: 824-828.

CHROMOSOMAL LOCATION

Genetic locus: MED21 (human) mapping to 12p11.23; Med21 (mouse) mapping to 6 G3.

SOURCE

Srb7 (31-C) is a mouse monoclonal antibody raised against recombinant Srb7 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Srb7 (31-C) is recommended for detection of Srb7 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Srb7 siRNA (h): sc-38585, Srb7 siRNA (m): sc-38586, Srb7 shRNA Plasmid (h): sc-38585-SH, Srb7 shRNA Plasmid (m): sc-38586-SH, Srb7 shRNA (h) Lentiviral Particles: sc-38585-V and Srb7 shRNA (m) Lentiviral Particles: sc-38586-V.

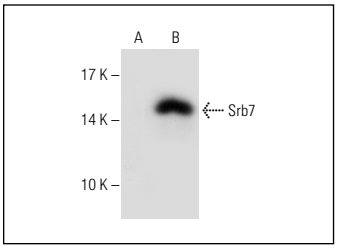
Molecular Weight of Srb7: 16 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Srb7 (m): 293T Lysate: sc-123774.

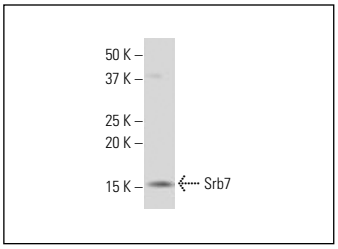
RECOMMENDED SUPPORT REAGENTS

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



Srb7 (31-C): sc-101186. Western blot analysis of Srb7 expression in non-transfected: sc-117752 (**A**) and mouse Srb7 transfected: sc-123774 (**B**) 293T whole cell lysates.



Srb7 (31-C): sc-101186. Western blot analysis of Srb7 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Viscarra, J.A., et al. 2017. Transcriptional activation of lipogenesis by Insulin requires phosphorylation of MED17 by CK2. Sci. Signal. 10: eaai8596.

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.