SANTA CRUZ BIOTECHNOLOGY, INC.

SNAPC 19 (9K8): sc-135565

BACKGROUND

TATA-box binding protein (TBP) interactions with TBP-associated factors (TAFs) are required for the transcription of RNA polymerases. One particular TBP-TAF complex, snRNA-activating protein complex (SNAPC), is unusual in that it regulates basal transcription of both RNA polymerase II and III by binding specifically to a non-TATA-box proximal sequence element (PSE). SNAPC consists of five subunits of varying size. SNAPC binds to Oct-1 and TBP, which are activators of snRNA and RNA polymerases, respectively. The POU domain of Oct-1 binds to SNAPC 190 and effectively recruits SNAPC to the PSE. The cooperative binding of SNAPC and Oct-1 to their respective sequence elements is mediated by a nucleosome positioned between the two sequence elements. SNAPC 19 mediates the assembly of the subunits to form a functional SNAPC transcription regulator. SNAPC 50 (also designated PTFβ) contains two zinc-finger motifs and binds to SNAPC 43 (also designated PTFγ) but not SNAPC 45 (PTFδ).

REFERENCES

1. Sadowski, C.L., et al. 1993. Targeting TBP to a non-TATA box *cis*-regulatory element: a TBP-containing complex activates transcription from snRNA promoters through the PSE. Genes Dev. 7: 1535-1548.
2. Henry, R.W., et al. 1995. A TBP-TAF complex required for transcription of human snRNA genes by RNA polymerase II and III. Nature 374: 653-666.
3. Sadowski, C.L., et al. 1996. The SNAP 45 subunit of the small nuclear RNA (snRNA) activating protein complex is required for RNA polymerase II and III snRNA gene transcription and interacts with the TATA box binding protein. Proc. Natl. Acad. Sci. USA 93: 4289-4293.
4. Henry, R.W., et al. 1996. Cloning and characterization of SNAP 50, a subunit of the snRNA-activating protein complex SNAPC. EMBO J. 15: 7129-7136.
5. Ford, E., et al. 1997. Characterization of a trimeric complex containing Oct-1, SNAPC, and DNA. J. Biol. Chem. 272: 16048-16055.
6. Mittal, V., et al. 1997. Role for the amino-terminal region of human TBP in U6 snRNA transcription. Science 275: 1136-1140.
7. Henry, R.W., et al. 1998. SNAP 19 mediates the assembly of a functional core promoter complex (SNAPC) shared by RNA polymerases II and III. Genes Dev. 12: 2664-2672.
8. Ford, E., et al. 1998. The Oct-1 POU domain activates snRNA gene transcription by contacting a region in the SNAPC largest subunit that bears sequence similarities to the Oct-1 coactivator OBF-1. Genes Dev. 12: 3528-3540.
9. Zhao, X., et al. 2001. A positioned nucleosome on the human U6 promoter allows recruitment of SNAPC by the Oct-1 POU domain. Mol. Cell. Biol. 7: 539-549.

CHROMOSOMAL LOCATION

Genetic locus: SNAPC5 (human) mapping to 15q22.31.

RESEARCH USE

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

SOURCE

SNAPC 19 (9K8) is a mouse monoclonal antibody raised against recombinant SNAPC 19 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SNAPC 19 (9K8) is recommended for detection of SNAPC 19 of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

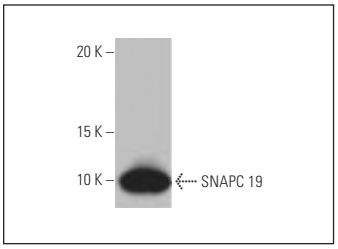
Suitable for use as control antibody for SNAPC 19 siRNA (h): sc-38400, SNAPC 19 shRNA Plasmid (h): sc-38400-SH and SNAPC 19 shRNA (h) Lentiviral Particles: sc-38400-V.

Positive Controls: HL-60 whole cell lysate: sc-2209.

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).

DATA



SNAPC 19 (9K8): sc-135565. Western blot analysis of SNAPC 19 expression in HL-60 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 for detailed protocols and support products.