SANTA CRUZ BIOTECHNOLOGY, INC.

SNAPC 190 (SNAAD17A): sc-81379

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. and Hernandez, N. 1997. Characterization of a trimeric complex containing Oct-1, SNAPC, and DNA. J. Biol. Chem. 272: 16048-16055.
6. Mittal, V. and Hernandez, N. 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. SNAP19 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 co-activator 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: SNAPC4 (human) mapping to 9q34.3.

RESEARCH USE

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

SOURCE

SNAPC 190 (SNAAD17A) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of SNAPC 190 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

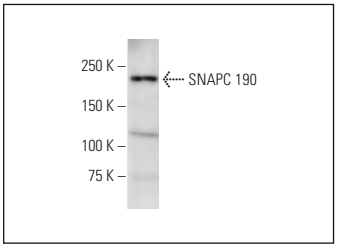
SNAPC 190 (SNAAD17A) is recommended for detection of SNAPC 190 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for SNAPC 190 siRNA (h): sc-38405, SNAPC 190 shRNA Plasmid (h): sc-38405-SH and SNAPC 190 shRNA (h) Lentiviral Particles: sc-38405-V.

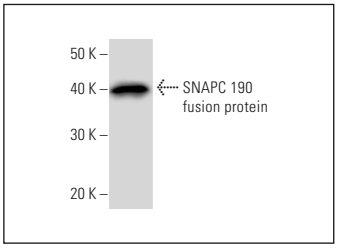
Molecular Weight of SNAPC 190: 190 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



SNAPC 190 (SNAAD17A): sc-81379. Western Blot analysis of SNAPC 190 expression in HeLa whole cell lysate.



SNAPC 190 (SNAAD17A): sc-81379. Western Blot analysis of human recombinant SNAPC 190 fusion protein.

SELECT PRODUCT CITATIONS

1. Baillat, D., et al. 2012. Requirement for SNAPC1 in transcriptional responsiveness to diverse extracellular signals. Mol. Cell. Biol. 32: 4642-4650.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

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