SANTA CRUZ BIOTECHNOLOGY, INC.

SAP 145 (D-4): sc-514976

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SF3b is a U2 snRNP-associated protein complex essential for spliceosome assembly. SF3b contains the spliceosomal proteins SAP 49, SAP 130, SAP 145, and SAP 155. SAP 130, SAP 145, and SAP 155 are present in a protein complex in HeLa nuclear extracts and associate with one another. While SAP 155 and SAP 130 interact with each other (directly or indirectly) within this complex, SAP 49 and SAP 145 are known to interact directly with each other. Unexpectedly, the SAP 49-SAP 145 protein-protein interaction requires the amino-terminus of SAP 49, which contains two RNA-recognition motifs. The observation that SAP 49 and SAP 145 interact directly with both U2 snRNP and the pre-mRNA suggests that this protein complex plays a role in tethering U2 snRNP to the branch site.

REFERENCES

1. Champion-Arnaud, P., et al. 1994. The prespliceosome components SAP 49 and SAP 145 interact in a complex implicated in tethering U2 snRNP to the branch site. Genes Dev. 8: 1974-1983.
2. Wells, S.E., et al. 1996. CUS1, a suppressor of cold-sensitive U2 snRNA mutations, is a novel yeast splicing factor homologous to human SAP 145. Genes Dev. 10: 220-232.
3. Igel, H., et al. 1998. Conservation of structure and subunit interactions in yeast homologues of splicing factor 3b (SF3b) subunits. RNA 4: 1-10.
4. Das, B.K., et al. 1999. Characterization of a protein complex containing spliceosomal proteins SAPs 49, 130, 145, and 155. Mol. Cell. Biol. 19: 6796-6802.
5. Kramer, A., et al. 1999. Combined biochemical and electron microscopic analyses reveal the architecture of the mammalian U2 snRNP. J. Cell Biol. 145: 1355-1368.

CHROMOSOMAL LOCATION

Genetic locus: SF3B2 (human) mapping to 11q13.1; Sf3b2 (mouse) mapping to 19 A.

SOURCE

SAP 145 (D-4) is a mouse monoclonal antibody raised against amino acids 596-895 mapping at the C-terminus of SAP 145 of human origin.

PRODUCT

Each vial contains 200 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.

PROTOCOLS

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

APPLICATIONS

SAP 145 (D-4) is recommended for detection of SAP 145 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 SAP 145 siRNA (h): sc-38316, SAP 145 siRNA (m): sc-153215, SAP 145 shRNA Plasmid (h): sc-38316-SH, SAP 145 shRNA Plasmid (m): sc-153215-SH, SAP 145 shRNA (h) Lentiviral Particles: sc-38316-V and SAP 145 shRNA (m) Lentiviral Particles: sc-153215-V.

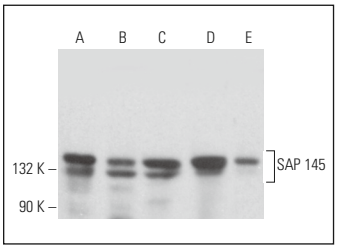
Molecular Weight of SAP 145: 145 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, PC-12 cell lysate: sc-2250 or NIH/3T3 whole cell lysate: sc-2210.

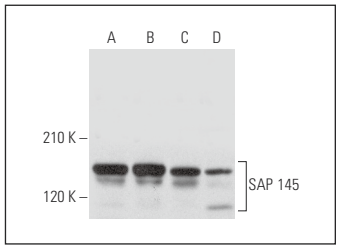
RECOMMENDED SUPPORT REAGENTS

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



SAP 145 (D-4): sc-514976. Western blot analysis of SAP 145 expression in PC-12 (**A**), BYDP (**B**), Neuro-2A (**C**) and NTERA-2 cl.D1 (**D**) whole cell lysates and rat brain tissue extract (**E**).



SAP 145 (D-4): sc-514976. Western blot analysis of SAP 145 expression in Jurkat (**A**) and HeLa (**B**) nuclear extracts and PC-12 (**C**) and NIH/3T3 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kitamura, K., et al. 2022. Dual function of SF3B2 on chromatin and RNA to regulate transcription in head and neck squamous cell carcinoma. Cell Biosci. 12: 92.

RESEARCH USE

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