

SAP 62 (32J-7): sc-101138

BACKGROUND

SAP 62, also known as SF3A2 (splicing factor 3A subunit 2), PRP11, PRPF11 or SF3a66, is a 464 amino acid protein that contains one matrin-type zinc finger and belongs to the SF3A2 family. Localized to the nucleus, SAP 62 is a subunit of the SF3A splicing factor, a heterotrimeric complex comprised of three subunits that act in tandem to mediate the binding of U2 snRNP to the branchpoint sequence (BPS) in pre-mRNA. The SF3A complex is necessary for the conversion of 15S U2 snRNP into the active 17S protein that performs directly in pre-mRNA splicing events. Functioning as the second subunit of the complex, SAP 62 interacts with subunit 1 (SAP 114) via its N-terminus while simultaneously binding to 15S U2 snRNP via its zinc finger domain. In addition to its role in RNA splicing, SAP 62 is thought to act independently as a microtubule-binding protein.

REFERENCES

1. Bennett, M. and Reed, R. 1993. Correspondence between a mammalian spliceosome component and an essential yeast splicing factor. *Science* 262: 105-108.
2. Dresser, D.W., et al. 1995. The genes for a spliceosome protein (SAP62) and the anti-Müllerian hormone (AMH) are contiguous. *Hum. Mol. Genet.* 4: 1613-1618.
3. Das, R., et al. 2000. Functional association of U2 snRNP with the ATP-independent spliceosomal complex E. *Mol. Cell* 5: 779-787.
4. Dresser, D.W., et al. 2001. An expressed GNRP-like gene shares a bi-directional promoter with SF3A2 (SAP62) immediately upstream of AMH. *Gene* 277: 163-173.
5. Jurica, M.S., et al. 2002. Purification and characterization of native spliceosomes suitable for three-dimensional structural analysis. *RNA* 8: 426-439.
6. Takenaka, K., et al. 2004. The pre-mRNA-splicing factor SF3a66 functions as a microtubule-binding and -bundling protein. *Biochem. J.* 382: 223-230.
7. Tanackovic, G. and Krämer, A. 2005. Human splicing factor SF3a, but not SF1, is essential for pre-mRNA splicing *in vivo*. *Mol. Biol. Cell* 16: 1366-1377.

CHROMOSOMAL LOCATION

Genetic locus: SF3A2 (human) mapping to 19p13.3; Sf3a2 (mouse) mapping to 10 C1.

SOURCE

SAP 62 (32J-7) is a mouse monoclonal antibody raised against recombinant SAP 62 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

SAP 62 (32J-7) is recommended for detection of SAP 62 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 SAP 62 siRNA (h): sc-76445, SAP 62 siRNA (m): sc-76446, SAP 62 shRNA Plasmid (h): sc-76445-SH, SAP 62 shRNA Plasmid (m): sc-76446-SH, SAP 62 shRNA (h) Lentiviral Particles: sc-76445-V and SAP 62 shRNA (m) Lentiviral Particles: sc-76446-V.

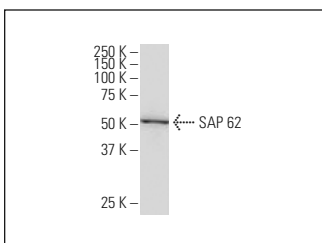
Molecular Weight of SAP 62: 66 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or A-431 nuclear extract: sc-2122.

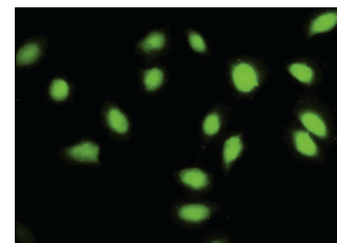
RECOMMENDED SUPPORT REAGENTS

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 62 (32J-7): sc-101138. Western blot analysis of SAP 62 expression in HeLa nuclear extract.



SAP 62 (32J-7): sc-101138. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Rizzotto, D., et al. 2020. Nutlin-induced apoptosis is specified by a translation program regulated by PCBP2 and DHX30. *Cell Rep.* 30: 4355-4369.e6.

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.