

# SAP 62 (4G8): sc-130563

## BACKGROUND

SAP 62, also known as SF3A2 (splicing factor 3A subunit 2), PRP11, PRPF1 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

- Bennett, M., et al. 1993. Correspondence between a mammalian spliceosome component and an essential yeast splicing factor. *Science* 262: 105-108.
- 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.
- Das, R., et al. 2000. Functional association of U2 snRNP with the ATP-independent spliceosomal complex E. *Mol. Cell* 5: 779-787.
- 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.
- Jurica, M.S., et al. 2002. Purification and characterization of native spliceosomes suitable for three-dimensional structural analysis. *RNA* 8: 426-439.
- Takenaka, K., et al. 2004. The pre-mRNA-splicing factor SF3a66 functions as a microtubule-binding and -bundling protein. *Biochem. J.* 382: 223-230.
- Tanackovic, G., et al. 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 (4G8) is a mouse monoclonal antibody raised against SAP 62 extracted from liver nuclei of rat origin, with epitope mapping at the C-terminus.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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

SAP 62 (4G8) is recommended for detection of the native and denatured form 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), immunohistochemistry (including paraffin-embedded sections) (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.

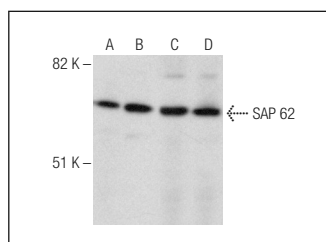
Molecular Weight of SAP 62: 66 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, A-431 nuclear extract: sc-2122 or K-562 nuclear extract: sc-2130.

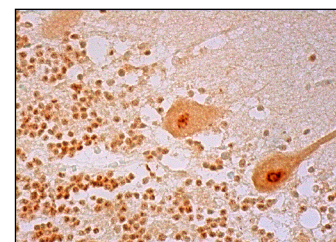
## RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto A Blocking Reagent: sc-2333 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 (4G8): sc-130563. Western blot analysis of SAP 62 expression in HeLa (A), A-431 (B), K-562 (C) and Hep G2 (D) nuclear extracts.



SAP 62 (4G8): sc-130563. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing nuclear and cytoplasmic staining of Purkinje cells and nuclear staining of cells in granular layer and cells in molecular layer.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.