

SAP 62 (4G8): sc-130563

BACKGROUND

SAP 62, also known as SF3A2 (splicing factor 3A subunit 2), PRPF11, 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

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- 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 bidirectional 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 IgG₁ 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.

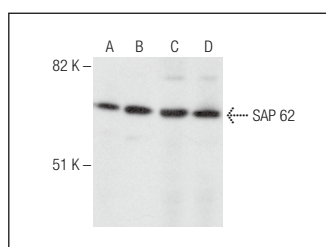
Molecular Weight of SAP 62: 66 kDa.

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

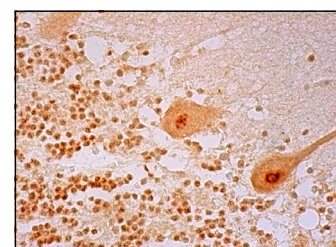
RECOMMENDED SUPPORT REAGENTS

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, 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

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 for detailed protocols and support products.