

SAP 61 (H-3): sc-393673

BACKGROUND

SAP 61, also known as SF3A3 (splicing factor 3A subunit 3), PRP9, PRPF9 or SF3a60, is a 501 amino acid protein that contains one matrin-type zinc finger and belongs to the SF3A3 family. Localized to the nucleus, SAP 61 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 branch-point 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 third subunit of the complex, SAP 61 interacts with subunit 1 (SAP 114) via its N-terminus, while simultaneously binding to 15S U2 snRNP via its zinc finger domain. As is the case for all SF3A subunits, SAP 61 is essential for prespliceosome assembly and cell viability. In addition, a pseudogene exists for SAP 61 on chromosome 20.

REFERENCES

- Krämer, A., et al. 1994. Splicing factor SF3a60 is the mammalian homologue of PRP9 of *S. cerevisiae*: the conserved zinc finger-like motif is functionally exchangeable *in vivo*. *Nucleic Acids Res.* 22: 5223-5228.
- Chiara, M.D., et al. 1994. Specific protein-protein interactions between the essential mammalian spliceosome-associated proteins SAP 61 and SAP 114. *Proc. Natl. Acad. Sci. USA* 91: 6403-6407.
- Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605596. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: SF3A3 (human) mapping to 1p34.3; Sf3a3 (mouse) mapping to 4 D2.2.

SOURCE

SAP 61 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 35-57 near the N-terminus of SAP 61 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-393673 X, 200 µg/0.1 ml.

SAP 61 (H-3) is available conjugated to agarose (sc-393673 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393673 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393673 PE), fluorescein (sc-393673 FITC), Alexa Fluor® 488 (sc-393673 AF488), Alexa Fluor® 546 (sc-393673 AF546), Alexa Fluor® 594 (sc-393673 AF594) or Alexa Fluor® 647 (sc-393673 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393673 AF680) or Alexa Fluor® 790 (sc-393673 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393673 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

SAP 61 (H-3) is recommended for detection of SAP 61 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).

SAP 61 (H-3) is also recommended for detection of SAP 61 in additional species, including equine, canine, bovine, porcine and avian.

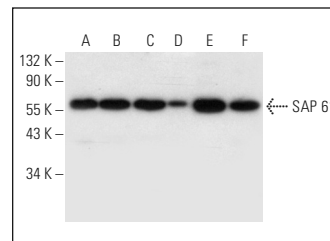
Suitable for use as control antibody for SAP 61 siRNA (h): sc-76443, SAP 61 siRNA (m): sc-76444, SAP 61 shRNA Plasmid (h): sc-76443-SH, SAP 61 shRNA Plasmid (m): sc-76444-SH, SAP 61 shRNA (h) Lentiviral Particles: sc-76443-V and SAP 61 shRNA (m) Lentiviral Particles: sc-76444-V.

SAP 61 (H-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

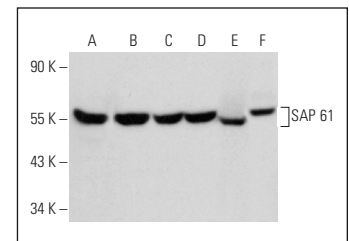
Molecular Weight of SAP 61: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Raji whole cell lysate: sc-364236 or Jurkat whole cell lysate: sc-2204.

DATA



SAP 61 (H-3): sc-393673. Western blot analysis of SAP 61 expression in A-431 (A), HeLa (B), Raji (C), 293T (D), Jurkat (E) and NIH/3T3 (F) whole cell lysates.



SAP 61 (H-3): sc-393673. Western blot analysis of SAP 61 expression in Jurkat (A), F9 (B), Neuro-2A (C) and NTERA-2 cl.D1 (D) whole cell lysates and human fetal muscle (E) and rat testis (F) tissue extracts.

SELECT PRODUCT CITATIONS

- Jin, L., et al. 2020. STRAP regulates alternative splicing fidelity during lineage commitment of mouse embryonic stem cells. *Nat. Commun.* 11: 5941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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.