

# SAP 114 (H-10): sc-515804

## BACKGROUND

SAP 114 (spliceosome associated protein 114), also known as PRP21, PRPF21, SF3A120 or SF3A1, is a 793 amino acid ubiquitously expressed nuclear protein belonging to the SURP protein family and contains 2 SURP motif repeats and one ubiquitin-like domain. SAP 114 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 is directly involved pre-mRNA splicing events. Functioning as the first subunit of the complex, SAP 114 interacts with subunit 2 (SAP 62) and subunit 3 (SAP 61) via its SURP motifs. SAP 114 is also thought to be involved in the assembly of the E complex, a critical regulator of cell cycle progression from G<sub>1</sub> into S phase in mammalian cells.

## REFERENCES

- 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.
- Seghezzi, W., et al. 1998. Cyclin E associates with components of the pre-mRNA splicing machinery in mammalian cells. *Mol. Cell. Biol.* 18: 4526-4536.
- Das, R., et al. 2000. Functional association of U2 snRNP with the ATP-independent spliceosomal complex E. *Mol. Cell* 5: 779-787.
- Will, C.L., et al. 2001. A novel U2 and U11/U12 snRNP protein that associates with the pre-mRNA branch site. *EMBO J.* 20: 4536-4546.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605595. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: SF3A1 (human) mapping to 22q12.2; Sf3a1 (mouse) mapping to 11 A1.

## SOURCE

SAP 114 (H-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-44 near the N-terminus of SAP 114 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> 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-515804 X, 200 µg/0.1 ml.

SAP 114 (H-10) is available conjugated to agarose (sc-515804 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515804 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515804 PE), fluorescein (sc-515804 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515804 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515804 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515804 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515804 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515804 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515804 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

SAP 114 (H-10) is recommended for detection of SAP 114 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 114 siRNA (h): sc-62974, SAP 114 siRNA (m): sc-62975, SAP 114 shRNA Plasmid (h): sc-62974-SH, SAP 114 shRNA Plasmid (m): sc-62975-SH, SAP 114 shRNA (h) Lentiviral Particles: sc-62974-V and SAP 114 shRNA (m) Lentiviral Particles: sc-62975-V.

SAP 114 (H-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SAP 114: 120 kDa.

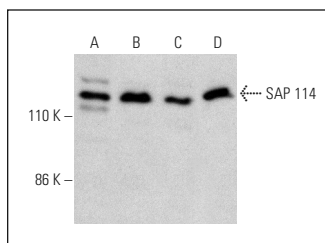
Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or K-562 whole cell lysate: sc-2203.

## RECOMMENDED SUPPORT REAGENTS

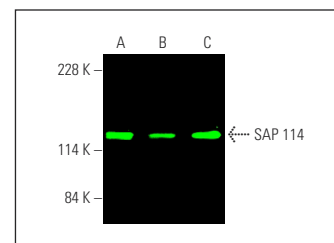
To ensure optimal results, the following support reagents are recommended:

- 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



SAP 114 (H-10): sc-515804. Western blot analysis of SAP 114 expression in K-562 whole cell lysate (A) and HeLa (B), A549 (C) and Jurkat (D) nuclear extracts.



SAP 114 (H-10): sc-515804. Near-infrared western blot analysis of SAP 114 expression in HeLa (A), A549 (B) and Jurkat (C) nuclear extracts. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

## 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.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA