

SAP 114 (N-20): sc-68784

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 G₁ 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™. 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 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SAP 114 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68784 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68784 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

SAP 114 (N-20) is recommended for detection of SAP 114 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).

SAP 114 (N-20) is also recommended for detection of SAP 114 in additional species, including equine, canine, bovine and porcine.

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 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

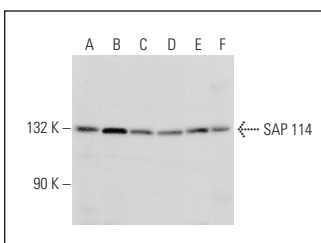
Molecular Weight of SAP 114: 120 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SAP 114 (N-20): sc-68784. Western blot analysis of SAP 114 expression in HeLa (A), K-562 (B), Hep G2 (C), PC-12 (D) and NIH/3T3 (E) whole cell lysates and mouse brain tissue extract (F).

RESEARCH USE

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