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Anti-SAP14 Antibody

Catalog # AP51508

Product Information

Application	WB, IF/IC
Primary Accession	Q9Y3B4
Reactivity	Human, Mouse, Rat, Zebrafish, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	14585

Additional Information

Gene ID	51639
Other Names	SAP14; SF3B14; SF3B14A; Splicing factor 3B subunit 6; Pre-mRNA branch site protein p14; SF3b 14 kDa subunit; SF3B14a; Spliceosome-associated protein, 14-kDa; Splicing factor 3b, subunit 6, 14kDa
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human SAP14. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	SF3B6
Synonyms	SAP14, SF3B14, SF3B14A
Function	Component of the 17S U2 SnRNP complex of the spliceosome, a large ribonucleoprotein complex that removes introns from transcribed pre-mRNAs (PubMed:12234937, PubMed:27720643, PubMed:32494006, PubMed:34822310). The 17S U2 SnRNP complex (1) directly participates in early spliceosome assembly and (2) mediates recognition of the intron branch site during pre-mRNA splicing by promoting the selection of the pre-mRNA branch-site adenosine, the nucleophile for the first step of splicing (PubMed:12234937, PubMed:32494006, PubMed:34822310). Within the 17S U2 SnRNP complex, SF3B6 is part of the SF3B subcomplex, which is required for 'A' complex assembly formed by the stable binding of U2 snRNP to the branchpoint sequence in pre-mRNA (PubMed:12234937, PubMed:27720643). Sequence independent binding of SF3A and SF3B subcomplexes upstream of

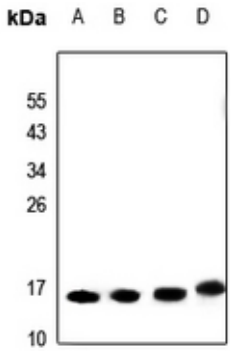
the branch site is essential, it may anchor U2 snRNP to the pre-mRNA (PubMed:12234937). Within the 17S U2 SnRNP complex, SF3B6 directly contacts the pre-mRNA branch site adenosine for the first catalytic step of splicing (PubMed:16432215). SF3B6 stabilizes the intron branch site-U2 snRNA duplex, thereby promoting- binding of introns with poor sequence complementarity (PubMed:34822310). Also acts as a component of the minor spliceosome, which is involved in the splicing of U12-type introns in pre-mRNAs (PubMed:15146077, PubMed:33509932).

Cellular Location Nucleus

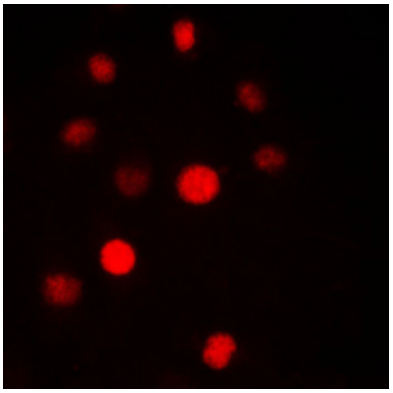
References

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Lai C.-H.,et al.Genome Res. 10:703-713(2000).
Zhang Q.-H.,et al.Genome Res. 10:1546-1560(2000).
Hu R.-M.,et al.Proc. Natl. Acad. Sci. U.S.A. 97:9543-9548(2000).
Will C.L.,et al.EMBO J. 21:4978-4988(2002).

Images



Western blot analysis of SAP14 expression in HEK293T (A), HepG2 (B), AML12 (C), PC12 (D) whole cell lysates. (Predicted band size: 14 kD; Observed band size: 14 kD)



Immunofluorescent analysis of SAP14 staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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