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SF3B1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13754a

Product Information

Application	WB, IHC-P, E
Primary Accession	O75533
Other Accession	O57683, Q99NB9, NP_036565.2
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Xenopus, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33758
Calculated MW	145830
Antigen Region	374-402

Additional Information

Gene ID	23451
Other Names	Splicing factor 3B subunit 1, Pre-mRNA-splicing factor SF3b 155 kDa subunit, SF3b155, Spliceosome-associated protein 155, SAP 155, SF3B1, SAP155
Target/Specificity	This SF3B1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 374-402 amino acids from the N-terminal region of human SF3B1.
Dilution	WB~~1:2000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SF3B1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SF3B1 {ECO:0000303|PubMed:30567737, ECO:0000312|HGNC:HGNC:10768}
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, PubMed:36104565). 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:32494006, PubMed:34822310, PubMed:36104565). Within the 17S U2 SnRNP complex, SF3B1 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:36104565). 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). May also be involved in the assembly of the 'E' complex (PubMed:10882114). 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). Together with other U2 snRNP complex components may also play a role in the selective processing of microRNAs (miRNAs) from the long primary miRNA transcript, pri-miR-17-92 (By similarity).

Cellular Location Nucleus. Nucleus speckle. Note=During mitosis, transiently dispersed from the nuclear speckles to the cytoplasm

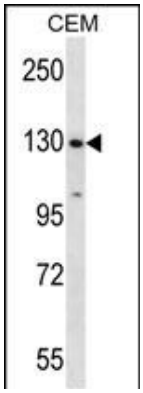
Background

This gene encodes subunit 1 of the splicing factor 3b protein complex. Splicing factor 3b, together with splicing factor 3a and a 12S RNA unit, forms the U2 small nuclear ribonucleoproteins complex (U2 snRNP). The splicing factor 3b/3a complex binds pre-mRNA upstream of the intron's branch site in a sequence independent manner and may anchor the U2 snRNP to the pre-mRNA. Splicing factor 3b is also a component of the minor U12-type spliceosome. The carboxy-terminal two-thirds of subunit 1 have 22 non-identical, tandem HEAT repeats that form rod-like, helical structures. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq].

References

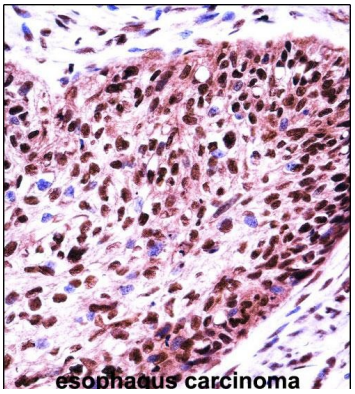
Corsini, L., et al. J. Biol. Chem. 284(1):630-639(2009)
Tanuma, N., et al. J. Biol. Chem. 283(51):35805-35814(2008)
Pessa, H.K., et al. Proc. Natl. Acad. Sci. U.S.A. 105(25):8655-8660(2008)
Kuwasako, K., et al. Proteins 71(4):1617-1636(2008)
Avila, M.L., et al. Biochem. Biophys. Res. Commun. 364(1):26-32(2007)

Images



SF3B1 Antibody (N-term) (Cat. #AP13754a) western blot analysis in CEM cell line lysates (35ug/lane).This demonstrates the SF3B1 antibody detected the SF3B1 protein (arrow).

SF3B1 Antibody (N-term)



(AP13754a)immunohistochemistry analysis in formalin fixed and paraffin embedded human esophagus carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of SF3B1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

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