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Fibrillarin Rabbit mAb

Catalog # AP75438

Product Information

Application	WB, FC
Primary Accession	P22087
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	33784

Additional Information

Gene ID	2091
Other Names	FBL
Dilution	WB~~1:1000-1:5000 FC~~1:10-1:100
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	FBL (HGNC:3599)
Synonyms	FIB1, FLRN
Function	S-adenosyl-L-methionine-dependent methyltransferase that has the ability to methylate both RNAs and proteins (PubMed:24352239, PubMed:30540930, PubMed:32017898). Involved in pre-rRNA processing by catalyzing the site-specific 2'-hydroxyl methylation of ribose moieties in pre-ribosomal RNA (PubMed:30540930). Site specificity is provided by a guide RNA that base pairs with the substrate (By similarity). Methylation occurs at a characteristic distance from the sequence involved in base pairing with the guide RNA (By similarity). Probably catalyzes 2'-O-methylation of U6 snRNAs in box C/D RNP complexes (PubMed:32017898). U6 snRNA 2'-O-methylation is required for mRNA splicing fidelity (PubMed:32017898). Also acts as a protein methyltransferase by mediating methylation of 'Gln-105' of histone H2A (H2AQ104me), a modification that impairs binding of the FACT complex and is specifically present at 35S ribosomal DNA locus (PubMed:24352239,

PubMed:30540930). Part of the small subunit (SSU) processome, first precursor of the small eukaryotic ribosomal subunit. During the assembly of the SSU processome in the nucleolus, many ribosome biogenesis factors, an RNA chaperone and ribosomal proteins associate with the nascent pre-rRNA and work in concert to generate RNA folding, modifications, rearrangements and cleavage as well as targeted degradation of pre-ribosomal RNA by the RNA exosome (PubMed:34516797).

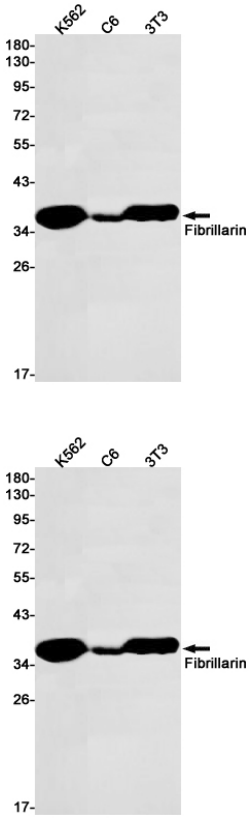
Cellular Location

Nucleus, nucleolus. Nucleus, nucleoplasm {ECO:0000250|UniProtKB:P35550}. Note=Fibrillar region of the nucleolus

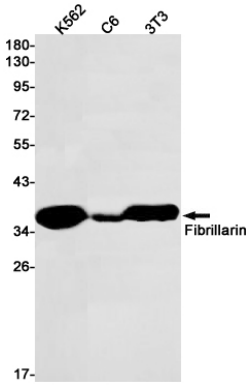
Background

Fibrillarin is a 2'-O-methyltransferase located in fibrillar regions and Cajal bodies of the nucleolus, where RNA transcription and pre-RNA processing take place. Fibrillarin associates with several other structual proteins as well as box C/D snoRNA to form a complex that functions in pre-rRNA processing, pre-rRNA methylation and ribosome assembly. This complex catalyzes site-specific 2'-O-ribose methylation of targeted nucleotides within the rRNA sequence. The sequence, structure and function of fibrillarin are highly conserved and fibrillarin gene expression is essential for early embryonic development.

Images



Western blot analysis of Fibrillarin in K562, C6, 3T3 lysates using Fibrillarin antibody.



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