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FBL Antibody (Center E120)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2776c

Product Information

Application	WB, E
Primary Accession	P22087
Other Accession	P22509, P35550
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB16515
Calculated MW	33784
Antigen Region	105-135

Additional Information

Gene ID	2091
Other Names	rRNA 2'-O-methyltransferase fibrillarin, 211-, 34 kDa nucleolar scleroderma antigen, Histone-glutamine methyltransferase, FBL, FIB1, FLRN
Target/Specificity	This FBL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 105-135 amino acids from the Central region of human FBL.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	FBL Antibody (Center E120) is for research use only and not for use in diagnostic or therapeutic procedures.

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

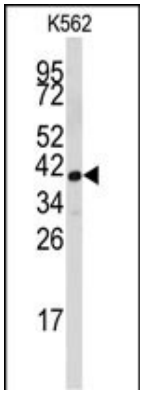
Background

FBL is a component of a nucleolar small nuclear ribonucleoprotein (snRNP) particle thought to participate in the first step in processing preribosomal RNA. It is associated with the U3, U8, and U13 small nuclear RNAs and is located in the dense fibrillar component (DFC) of the nucleolus. This protein contains an N-terminal repetitive domain that is rich in glycine and arginine residues, like fibrillarins in other species. Its central region resembles an RNA-binding domain and contains an RNP consensus sequence. Antisera from approximately 8% of humans with the autoimmune disease scleroderma recognize fibrillarin.

References

Amin,M.A., Biochem. Biophys. Res. Commun. 360 (2), 320-326 (2007)
Dunphy,J.L., Traffic 8 (6), 661-672 (2007)

Images



Western blot analysis of anti-FBL Antibody (Center E120) (Cat.#AP2776c) in K562 cell line lysates (35ug/lane). FBL (arrow) was detected using the purified Pab.