10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FTSJ1 Rabbit pAb

FTSJ1 Rabbit pAb
Catalog # AP54800

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9UET6
Reactivity	Mouse
Predicted	Rat, Pig, Dog, Human, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36079
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from Human FTSJ1
Epitope Specificity	1-110/329
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
DISEASE	Defects in FTSJ1 are the cause of mental retardation X-linked type 44 (MRX44) [MIM:309549]. Mental retardation is characterized by significantly sub-average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. Non-syndromic mental retardation patients do not manifest other clinical signs.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	FTSJ1 is a 329 amino acid nucleolar protein belonging to the RlmE family and methyltransferase superfamily. Expressed in adult thalamus, hippocampus, amygdala, corpus callosum and caudate nucleus, as well as fetal kidney, lung, liver, brain and lung, FTSJ1 plays a role in rRNA modification and processing. FTSJ1 exists as multiple spliced isoforms which are encoded by a gene located on human chromosome Xp11.23. Notably, defects in the gene encoding FTSJ1 are the cause of mental retardation X-linked type 44 (MRX44) and nonsyndromic X-linked mental retardation (MRX9).

Additional Information

Gene ID	24140
Other Names	tRNA (cytidine(32)/guanosine(34)-2'-O)-methyltransferase, 2.1.1.205 {ECO:0000255|HAMAP-Rule:MF_03162, ECO:0000269|PubMed:32558197, ECO:0000269|PubMed:33771871, ECO:0000305|PubMed:36720500}, 2'-O-ribose RNA methyltransferase TRM7 homolog {ECO:0000255|HAMAP-Rule:MF_03162}, Protein ftsJ homolog 1 {ECO:0000255|HAMAP-Rule:MF_03162}, FTSJ1 {ECO:0000255|HAMAP-Rule:MF_03162}

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

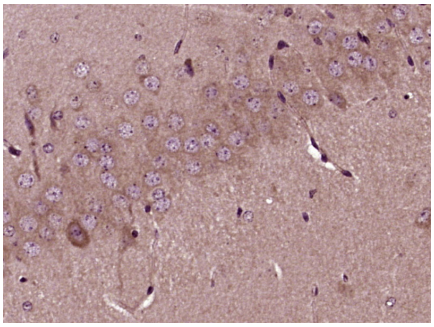
Name	FTSJ1 {ECO:0000255|HAMAP-Rule:MF_03162}
Function	Methylates the 2'-O-ribose of nucleotides at positions 32 and 34 of the tRNA anticodon loop of substrate tRNAs (PubMed:25404562, PubMed:26310293, PubMed:32198346, PubMed:32558197, PubMed:33771871, PubMed:36720500). Requisite for faithful cytoplasmic translation (PubMed:32393790). Requires THADA for methylation of the nucleotide at position 32 of the anticodon loop of substrate tRNAs (PubMed:25404562, PubMed:26310293). Requires WDR6 for methylation of the nucleotide at position 34 of the anticodon loop of substrate tRNAs (PubMed:32558197, PubMed:33771871). Promotes translation efficiency of the UUU codon (PubMed:32558197). Plays a role in neurogenesis (PubMed:36720500). Required for expression of genes involved in neurogenesis, mitochondrial translation and energy generation, and lipid biosynthesis (PubMed:33771871, PubMed:36720500). Requisite for RNA-mediated gene silencing (PubMed:36720500). May modify position 32 in tRNA(Arg(ACG)), tRNA(Arg(CCG)), tRNA(Arg(UCG)), tRNA(Cys(GCA)), tRNA(Cys(ACA)), tRNA(Gln(CUG)), tRNA(Gln(UUG)), tRNA(Gly(CCC)), tRNA(Leu(CAG))/tRNA(Leu(CAA)), tRNA(Leu(A/IAG)), tRNA(Leu(UAG)), tRNA(Phe(GAA)), tRNA(Pro(AGG))/tRNA(Pro(CGG))/tRNA(Pro(UGG)) and tRNA(Trp(CCA)), and position 34 in tRNA(Phe(GAA)), tRNA(Leu(CAA)), tRNA(Sec(UCA)), and tRNA(Trp(CCA)) (PubMed:26310293, PubMed:32198346, PubMed:32558197, PubMed:33771871, PubMed:36720500).
Cellular Location	Cytoplasm. Nucleus. Note=Predominantly cytoplasmic
Tissue Location	Found in fetal brain, lung, liver and kidney (PubMed:15162322). Widely expressed in adult tissue; with high expression in heart and liver, lower expression in skeletal muscle, kidney, and pancreas and also lowly expressed in brain and lung (PubMed:15342698). In the adult brain, expressed in amygdala, caudate nucleus, corpus callosum, hippocampus and thalamus (PubMed:15162322)

Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Images

Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (FTSJ1) Polyclonal Antibody, Unconjugated (AP54800) at 1:400 overnight at 4°C,



followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.