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MTRF1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17473c

Product Information

Application	WB, E
Primary Accession	O75570
Other Accession	Q8K126, Q3MHI7, NP_004285.2
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB37497
Calculated MW	52306
Antigen Region	232-259

Additional Information

Gene ID	9617
Other Names	Peptide chain release factor 1, mitochondrial, MRF-1, MtRF-1, MTRF1
Target/Specificity	This MTRF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 232-259 amino acids from the Central region of human MTRF1.
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 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	MTRF1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RF1M
Function	Mitochondrial peptide chain release factor that directs the termination of translation in response to the peptide chain non- canonical stop codons AGG and AGA (PubMed:36302763, PubMed:36596788, PubMed:37141370).

Non-canonical termination codons AGG and AGA are found at the end of MT-CO1/COX1 and MT-ND6/ND6 open reading frames, respectively (PubMed:37141370). Recognizes non-canonical stop codons via a network of interactions between the codon, MTRF1 and the ribosomal RNA (rRNA): in contrast to other translation release factors, which identify the codon in the A-site via direct interactions of amino acid side chains with the bases, MTRF1 repositions the first 2 bases of the stop codon to use an intricate network of interactions that includes residues of the release factor, the rRNA of the small ribosomal subunit, as well as neighboring bases of the mRNA (PubMed:37141370).

Cellular Location Mitochondrion

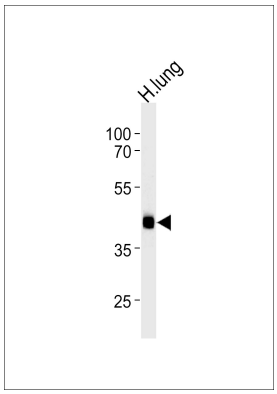
Background

The protein encoded by this gene was determined by in silico methods to be a mitochondrial protein with similarity to the peptide chain release factors (RFs) discovered in bacteria and yeast. The peptide chain release factors direct the termination of translation in response to the peptide chain termination codons. Initially thought to have a role in the termination of mitochondria protein synthesis, a recent publication found no mitochondrial translation release functionality. Multiple alternatively spliced transcript variants have been suggested by mRNA and EST data; however, their full-length natures are not clear. [provided by RefSeq].

References

Antonicka, H., et al. Am. J. Hum. Genet. 87(1):115-122(2010)
Nozaki, Y., et al. Genes Cells 13(5):429-438(2008)
Soleimanpour-Lichaei, H.R., et al. Mol. Cell 27(5):745-757(2007)
Hansen, L.L., et al. Cytogenet. Cell Genet. 88 (1-2), 91-92 (2000) :
Zhang, Y., et al. Biochim. Biophys. Acta 1443 (1-2), 245-250 (1998) :

Images



Western blot analysis of lysate from human lung tissue lysate, using MTRF1 Antibody (Center)(Cat. #AP17473c). AP17473c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.

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