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EARS2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7573b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q5JPH6
Reactivity	Human
Predicted	Mouse, Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB14808
Calculated MW	58689
Antigen Region	495-523

Additional Information

Gene ID	124454
Other Names	Probable glutamate--tRNA ligase, mitochondrial, Glutamyl-tRNA synthetase, GluRS, EARS2, KIAA1970
Target/Specificity	This EARS2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 495-523 amino acids from the C-terminal region of human EARS2.
Dilution	WB~~1:1000 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 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	EARS2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EARS2 (HGNC:29419)
Function	Non-discriminating glutamyl-tRNA synthetase that catalyzes aminoacylation of both mitochondrial tRNA(Glu) and tRNA(Gln) and participates in RNA aminoacylation for mitochondrial protein translation (PubMed:19805282).

Attachs glutamate to tRNA(Glu) or tRNA(Gln) in a two-step reaction: glutamate is first activated by ATP to form Glu-AMP and then transferred to the acceptor end of tRNA(Glu) or tRNA(Gln) (PubMed:19805282). In vitro, cytoplasmic tRNA(Gln) is slightly glutamylated, but with low activity (PubMed:19805282).

Cellular Location Mitochondrion matrix

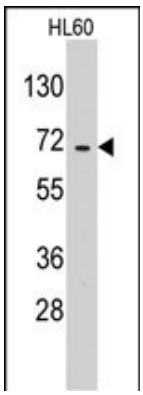
Background

Glutamyl-tRNA synthetase (GluRS or EARS2) a class I aminoacyl-tRNA synthetase (aaRS), is primarily responsible for the glutamylation of tRNAGlu. It is part of the ?minimal set?of seventeen aaRSs found in every living organism and its presence is essential for the viability of cells.

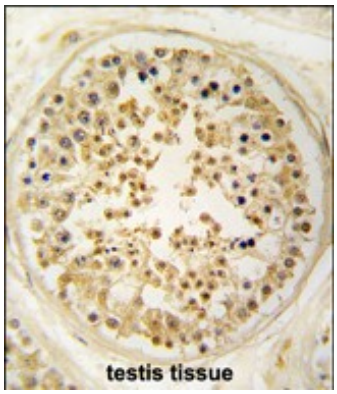
References

Bonnefond,L.,Biochemistry 44 (12), 4805-4816 (2005)

Images



Western blot analysis of anti-EARS2 Pab (Cat.#AP7573b) in HL60 cell line lysates (35ug/lane).EARS2 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human testis tissue reacted with EARS2 antibody (C-term) (Cat.#AP7573b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Altered 2-thiouridylation impairs mitochondrial translation in reversible infantile respiratory chain deficiency.

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