

# EARS2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7573b

## Product Information

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<b>Application</b>	WB, IHC-P, E
<b>Primary Accession</b>	<a href="#">Q5JPH6</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB14808
<b>Calculated MW</b>	58689
<b>Antigen Region</b>	495-523

## Additional Information

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<b>Gene ID</b>	124454
<b>Other Names</b>	Probable glutamate--tRNA ligase, mitochondrial, Glutamyl-tRNA synthetase, GluRS, EARS2, KIAA1970
<b>Target/Specificity</b>	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.
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	EARS2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	EARS2 ( <a href="#">HGNC:29419</a> )
<b>Function</b>	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: <a href="#">19805282</a> ). Attaches 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

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Glutamyl-tRNA synthetase (GluRS or EARS2) a class I aminoacyl-tRNA synthetase (aaRS), is primarily responsible for the glutamylation of tRNA<sup>Glu</sup>. 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.

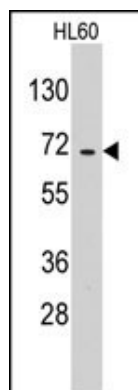
## References

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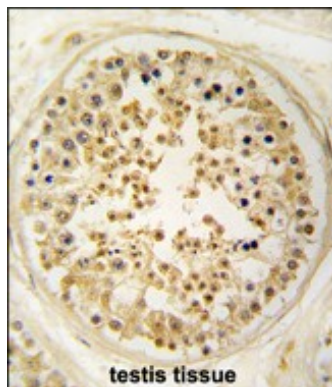
Bonnefond,L.,Biochemistry 44 (12), 4805-4816 (2005)

## Images

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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

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- [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'.