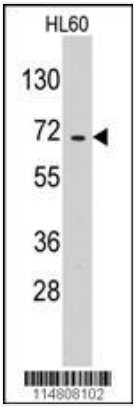
EARS2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	EARS2, Polyclonal Antibody
Full Product Name	EARS2, CT (Probable Glutamyl-tRNA Synthetase, Mitochondrial, Glutamate-tRNA Ligase, GluRS, KIAA1970) (AP)
Product Gene Name	anti-EARS2 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase.
Purity/Purification	Purified by Ammonium Sulfate Precipitation.
Specificity	Recognizes human EARS2.
Preparation and Storage	May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	59kDa
OMIM	AK095998 mRNA
3D Structure	ModBase 3D Structure for Q5JPH6
Immunogen	Synthetic peptide selected from the C-terminal region of human EARS2 (KLH).
Conjugate	AP
Note	Preservative Free
Product Categories/Family for anti-EARS2 antibody	Antibodies; Enzymes; Synthetase
Applications Tested/Suitable for anti-EARS2 antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-EARS2 antibody	IHC: 1:10-1:50 ELISA: 1:1,000 WB: 1:50-1:100 Applications are based on unconjugated antibody.
Related Product Information for anti-EARS2 antibody	MBS6473441 is an antibody targeting EARS2. Also known as EARS2, CT (Probable Glutamyl-tRNA Synthetase, Mitochondrial, Glutamate-tRNA Ligase, GluRS, KIAA1970) (AP). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-EARS2 antibody	1. Bonnefond, L., Biochemistry 44(12), 4805-4816 (2005).
Other Notes	Small volumes of anti-EARS2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



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



Immunohistochemistry (IHC) of anti-EARS2 antibody
Formalin-fixed and paraffin-embedded human testis tissue reacted with EARS2 antibody (C-term), 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for EARS2. It may not necessarily be applicable to this product.

NCBI GI #	134288884
NCBI GeneID	124454
NCBI Accession #	NP_001077083
UniProt Primary Accession #	Q5JPH6
UniProt Related Accession #	Q5JPH6
GenBank Nucleotide #	NM_001083614
NCBI Official Full Name	probable glutamate--tRNA ligase, mitochondrial isoform 1
NCBI Official Synonym Full Names	glutamyl-tRNA synthetase 2, mitochondrial
NCBI Official Symbol	EARS2
NCBI Official Synonym Symbols	MSE1; gluRS; COXPD12
UniProt Protein Name	Probable glutamate--tRNA ligase, mitochondrial
UniProt Synonym Protein Names	Glutamyl-tRNA synthetase; GluRS
Protein Family	Probable glutamate--tRNA ligase
UniProt Gene Name	EARS2
UniProt Synonym Gene Names	KIAA1970; GluRS
NCBI Protein Information	probable glutamate--tRNA ligase, mitochondrial
NCBI Summary for EARS2	This gene encodes a member of the class I family of aminoacyl-tRNA synthetases. These enzymes play a critical role in protein biosynthesis by charging tRNAs with their cognate amino acids. This protein is encoded by the nuclear genome but is likely to be imported to the mitochondrion where it is thought to catalyze the ligation of glutamate to tRNA molecules. Mutations in this gene have been associated with combined oxidative phosphorylation deficiency 12 (COXPD12). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2015]

UniProt Comments for EARS2	EARS2: Catalyzes the attachment of glutamate to tRNA(Glu) 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). Belongs to the class-I aminoacyl-tRNA synthetase family. Protein type: Aminoacyl-tRNA synthetase; Cofactor and Vitamin Metabolism - porphyrin and chlorophyll; EC 6.1.1.17; Ligase; Mitochondrial; Translation; Translation regulation Chromosomal Location of Human Ortholog: 16p12.2 Cellular Component: mitochondrial matrix; mitochondrion Molecular Function: ATP binding; glutamate-tRNA ligase activity; glutamate-tRNA(Gln) ligase activity; tRNA binding; zinc ion binding Biological Process: glutamyl-tRNA aminoacylation Disease: Combined Oxidative Phosphorylation Deficiency 12
Research Articles on EARS2	**1.** This study presented that a new neurological disease, early-onset leukoencephalopathy with thalamus and brainstem involvement and high lactate, defined by a peculiar biphasic clinical course and caused by mutations in a single gene, EARS2.
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