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AARS2 Rabbit pAb

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Catalog # AP56084

Product Information

Application	WB
Primary Accession	Q5JTZ9
Reactivity	Human, Mouse, Rat
Predicted	Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	107340
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human AARS2
Epitope Specificity	451-550/985
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Mitochondrion matrix.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene belongs to the class-II aminoacyl-tRNA synthetase family. Aminoacyl-tRNA synthetases play critical roles in mRNA translation by charging tRNAs with their cognate amino acids. The encoded protein is a mitochondrial enzyme that specifically aminoacylates alanyl-tRNA. Mutations in this gene are a cause of combined oxidative phosphorylation deficiency 8. [provided by RefSeq, Dec 2011].

Additional Information

Gene ID	57505
Other Names	Alanine--tRNA ligase, mitochondrial {ECO:0000255|HAMAP-Rule:MF_03133}, 6.1.1.7 {ECO:0000255|HAMAP-Rule:MF_03133}, Alanyl-tRNA synthetase {ECO:0000255|HAMAP-Rule:MF_03133}, AlaRS {ECO:0000255|HAMAP-Rule:MF_03133}, Protein lactyltransferase AARS2, 6.-.-.-, AARS2 {ECO:0000255|HAMAP-Rule:MF_03133}, AARSL, KIAA1270
Dilution	WB=1:500-2000
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.

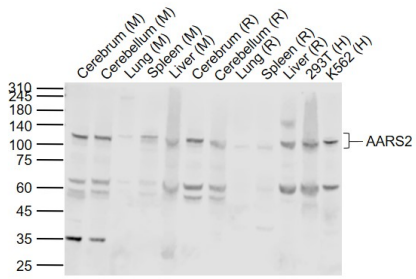
Protein Information

Name	AARS2 {ECO:0000255|HAMAP-Rule:MF_03133}
Synonyms	AARSL, KIAA1270
Function	Catalyzes the attachment of alanine to tRNA(Ala) in a two- step reaction: alanine is first activated by ATP to form Ala-AMP and then transferred to the acceptor end of tRNA(Ala). Also edits incorrectly charged tRNA(Ala) via its editing domain (PubMed:21549344). In presence of high levels of lactate, also acts as a protein lactyltransferase that mediates lactylation of lysine residues in target proteins, such as CGAS (PubMed:39322678). Acts as an inhibitor of cGAS/STING signaling by catalyzing lactylation of CGAS, preventing the formation of liquid-like droplets in which CGAS is activated (PubMed:39322678).
Cellular Location	Mitochondrion {ECO:0000255|HAMAP-Rule:MF_03133, ECO:0000269|PubMed:21549344}

Background

The protein encoded by this gene belongs to the class-II aminoacyl-tRNA synthetase family. Aminoacyl-tRNA synthetases play critical roles in mRNA translation by charging tRNAs with their cognate amino acids. The encoded protein is a mitochondrial enzyme that specifically aminoacylates alanyl-tRNA. Mutations in this gene are a cause of combined oxidative phosphorylation deficiency 8. [provided by RefSeq, Dec 2011].

Images



Sample:
Lane 1: Cerebrum (Mouse) Lysate at 40 ug
Lane 2: Cerebellum (Mouse) Lysate at 40 ug
Lane 3: Lung (Mouse) Lysate at 40 ug
Lane 4: Spleen (Mouse) Lysate at 40 ug
Lane 5: Liver (Mouse) Lysate at 40 ug
Lane 6: Cerebrum (Rat) Lysate at 40 ug
Lane 7: Cerebellum (Rat) Lysate at 40 ug
Lane 8: Lung (Rat) Lysate at 40 ug
Lane 9: Spleen (Rat) Lysate at 40 ug
Lane 10: Liver (Rat) Lysate at 40 ug
Lane 11: 293T (Human) Cell Lysate at 30 ug
Lane 12: K562 (Human) Cell Lysate at 30 ug
Primary: Anti-AARS2 (AP56084) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 107 kD
Observed band size: 110 kD