10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

AARS2 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP56084

Specification

AARS2 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, E**
Primary Accession	Q5JTZ9
Reactivity	**Rat, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**115 KDa**
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].

AARS2 Polyclonal Antibody - 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}, AARS2 {ECO:0000255|HAMAP-Rule:MF_03133}, AARSL, KIAA1270

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>E~~N/A

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Storage
Store at -20 ℃ 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 ℃.

AARS2 Polyclonal Antibody - 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).

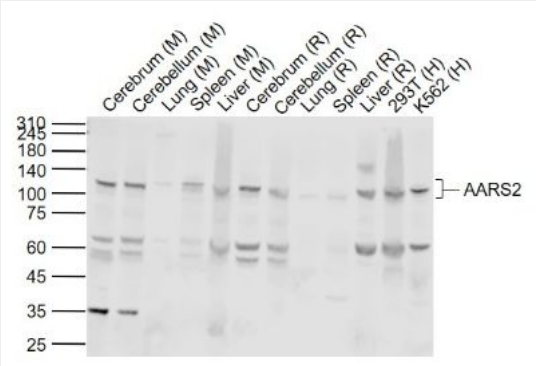
Cellular Location
Mitochondrion {ECO:0000255|HAMAP-Rule:MF_03133, ECO:0000269|PubMed:21549344}

AARS2 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

AARS2 Polyclonal Antibody - Images



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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 (bs-1603R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 107 kD
Observed band size: 110 kD