

Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide
Synthetic peptide
Catalog # BP7559b

Specification

Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide - Product Information

Primary Accession
Other Accession

[Q5JTZ9](#)
[A2RRN5](#)

Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide - Additional Information

Gene ID 57505

Other Names

Alanine--tRNA ligase, mitochondrial {ECO:0000255|HAMAP-Rule:MF_03133}, 6117 {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}

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP7559b was selected from the C-term region of human AARS2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide - 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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/39322678)).

Cellular Location

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

Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide - Images**Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide - Background**

Alanyl-tRNA synthetase 2 (AARS2) is an enzyme that catalyzes the chemical reaction: ATP + L-alanine + tRNAAla AMP + diphosphate + L-alanyl-tRNAAla. This enzyme participates in alanine and aspartate metabolism and aminoacyl-tRNA biosynthesis.

Alanyl-tRNA synthetase 2 (AARS2) Antibody(C-term) Blocking peptide - References

Bonnefond,L., Biochemistry 44 (12), 4805-4816 (2005) Nakayama,M., Genome Res. 12 (11), 1773-1784 (2002)