

# AARS2 (T-17): sc-167030

## BACKGROUND

AARS2 (alanyl-tRNA synthetase 2, mitochondrial (putative)), also known as Alanine-tRNA ligase, AARSL or AlaRS, is a 985 amino acid protein belonging to the class-II aminoacyl-tRNA synthetase family. AARS2 contains 22 exons and spans 13.7 kb. Encoded by a gene that maps to human chromosome 6p21.1, AARS2 participates in Aminoacyl-tRNA synthetase and ligase activities, as well as ATP, metal ion, and tRNA binding. AARS2 consists of three domains; the N-terminal catalytic domain, the editing domain and the C-terminal C-Ala domain. The editing domain eradicates incorrectly charged amino acids, while the C-Ala domain assists in uniting aminoacylation and editing centers to activate deacylation of misacylated tRNAs. AARS2 assists in the attachment of alanine to tRNA(Ala) when ATP activates alanine to form Ala-AMP, which is transferred to the acceptor end of tRNA(Ala).

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: AARS2 (human) mapping to 6p21.1; Aars2 (mouse) mapping to 17 B3.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## SOURCE

AARS2 (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AARS2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167030 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AARS2 (T-17) is recommended for detection of AARS2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with AARSD1.

AARS2 (T-17) is also recommended for detection of AARS2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AARS2 siRNA (h): sc-95483, AARS2 siRNA (m): sc-140734, AARS2 shRNA Plasmid (h): sc-95483-SH, AARS2 shRNA Plasmid (m): sc-140734-SH, AARS2 shRNA (h) Lentiviral Particles: "sc-95483-V and AARS2 shRNA (m) Lentiviral Particles: sc-140734-V.

Molecular Weight of AARS2: 107 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.