

# ARALAR (E-12): sc-107417

## BACKGROUND

Calcium signaling in mitochondria is important in order for it to function in response to a variety of extracellular stimuli. Signaling begins with Ca<sup>2+</sup> entry in mitochondria via the Ca<sup>2+</sup> uniporter followed by Ca<sup>2+</sup> activation of three dehydrogenases in the mitochondrial matrix. ARALAR, the neuronal Ca<sup>2+</sup>-binding mitochondrial aspartate-glutamate carrier, has Ca<sup>2+</sup> binding domains facing the extramitochondrial space and functions in the malate-aspartate NADH shuttle (MAS). ARALAR is encoded by the SLC25a12 gene and is expressed in brain and skeletal muscle. ARALAR is required for the synthesis of brain aspartate and N-acetylaspartate and plays a role in myelin formation. It is also essential for the transmission of small Ca<sup>2+</sup> signals to mitochondria via an increase in mitochondrial NADH. In addition, ARALAR is implicated in conferring susceptibility to schizophrenia.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SLC25A12 (human) mapping to 2q31.1; Slc25a12 (mouse) mapping to 2 C2.

## SOURCE

ARALAR (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ARALAR of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107417 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ARALAR (E-12) is recommended for detection of ARALAR 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).

ARALAR (E-12) is also recommended for detection of ARALAR in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ARALAR siRNA (h): sc-94426, ARALAR siRNA (m): sc-141183, ARALAR shRNA Plasmid (h): sc-94426-SH, ARALAR shRNA Plasmid (m): sc-141183-SH, ARALAR shRNA (h) Lentiviral Particles: sc-94426-V and ARALAR shRNA (m) Lentiviral Particles: sc-141183-V.

Molecular Weight of ARALAR: 70 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, SW-13 cell lysate: sc-24778 or Ramos cell lysate: sc-2216.

## 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.

## RESEARCH USE

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

## PROTOCOLS

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