

PheRS (H-300): sc-98544

BACKGROUND

The fidelity of protein synthesis requires efficient discrimination of amino acid substrates by aminoacyl-tRNA synthetases. Aminoacyl-tRNA synthetases function to catalyze the aminoacylation of tRNAs by their corresponding amino acids, thus linking amino acids with tRNA-contained nucleotide triplets. PheRS (phenylalanyl-tRNA synthetase 2, mitochondrial), also known as FARS2, is a 451 amino acid mitochondrial matrix protein that belongs to the class II aminoacyl-tRNA synthetase family. Functioning as a monomer, PheRS catalyzes the ATP-dependent conversion of L-phenylalanine and tRNA(Phe) to L-phenylalanyl-tRNA(Phe), an event that is crucial for proper translation and protein expression. The gene encoding PheRS maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: FARS2 (human) mapping to 6p25.1; Fars2 (mouse) mapping to 13 A3.3.

SOURCE

PheRS (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PheRS of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

PheRS (H-300) is recommended for detection of PheRS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

PheRS (H-300) is also recommended for detection of PheRS in additional species, including equine and canine.

Suitable for use as control antibody for PheRS siRNA (h): sc-76115, PheRS siRNA (m): sc-76116, PheRS shRNA Plasmid (h): sc-76115-SH, PheRS shRNA Plasmid (m): sc-76116-SH, PheRS shRNA (h) Lentiviral Particles: sc-76115-V and PheRS shRNA (m) Lentiviral Particles: sc-76116-V.

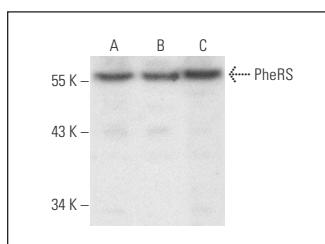
Molecular Weight of PheRS: 48 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, CCRF-CEM cell lysate: sc-2225 or T-47D cell lysate: sc-2293.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PheRS (H-300): sc-98544. Western blot analysis of PheRS expression in K-562 (A), CCRF-CEM (B) and T-47D (C) whole cell lysates.

STORAGE

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