SANTA CRUZ BIOTECHNOLOGY, INC.

HARS2 (C-23): sc-130586

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. HARS2 (histidyl-tRNA synthetase 2), also known as HO3, HARSL or HARSR, is a 506 amino acid protein that localizes to the mitochondrial matrix and belongs to the class II aminoacyl-tRNA synthetase family. Highly expressed in kidney, heart and skeletal muscle with lower levels present in liver and brain, HARS2 functions in the ATP-dependent synthesis of histidyl-transfer RNA, playing an accessory role in the regulation of protein synthesis. The gene encoding HARS2 maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome.

REFERENCES

1. Raben, N., Borriello, F., Amin, J., Horwitz, R., Fraser, D. and Plotz, P. 1992. Human histidyl-tRNA synthetase: recognition of amino acid signature regions in class 2a aminoacyl-tRNA synthetases. Nucleic Acids Res. 20: 1075-1081.
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3. O'Hanlon, T.P., Raben, N. and Miller, F.W. 1995. A novel gene oriented in a head-to-head configuration with the human histidyl-tRNA synthetase (HRS) gene encodes an mRNA that predicts a polypeptide homologous to HRS. Biochem. Biophys. Res. Commun. 210: 556-566.
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5. Freist, W., Verhey, J.F., Rühlmann, A., Gauss, D.H. and Arnez, J.G. 1999. Histidyl-tRNA synthetase. Biol. Chem. 380: 623-646.
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CHROMOSOMAL LOCATION

Genetic locus: HARS2 (human) mapping to 5q31.3.

SOURCE

HARS2 (C-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of HARS2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

HARS2 (C-23) is recommended for detection of HARS2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

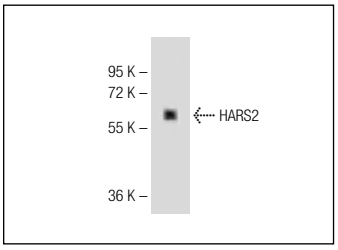
Suitable for use as control antibody for HARS2 siRNA (h): sc-92036, HARS2 shRNA Plasmid (h): sc-92036-SH and HARS2 shRNA (h) Lentiviral Particles: sc-92036-V.

Molecular Weight of HARS2: 57 kDa.

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.

DATA



HARS2 (C-23): sc-130586. Western blot analysis of HARS2 expression in HeLa whole cell lysate.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.