

GluRS (H-300): sc-98540

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. GluRS (glutamyl-tRNA synthetase 2), also known as EARS2 or MSE1, is a 523 amino acid protein that localizes to the mitochondrial matrix and belongs to the class I aminoacyl-tRNA synthetase family. Participating in protein biosynthesis, GluRS functions to catalyze the ATP-dependent attachment of glutamate to tRNA(Glu), a two-step reaction that involves the ATP-dependent activation of glutamate to form Glu-AMP and the subsequent transfer of the glutamate residue to tRNA(Glu).

REFERENCES

1. Frugier, M., Soll, D., Giege, R. and Florentz, C. 1994. Identity switches between tRNAs aminoacylated by class I glutaminyl- and class II aspartyl-tRNA synthetases. *Biochemistry* 33: 9912-9921.
2. Freist, W., Gauss, D.H., Soll, D. and Lapointe, J. 1997. Glutamyl-tRNA synthetase. *Biol. Chem.* 378: 1313-1329.

CHROMOSOMAL LOCATION

Genetic locus: EARS2 (human) mapping to 16p12.2; Ears2 (mouse) mapping to 7 F3.

SOURCE

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

APPLICATIONS

GluRS (H-300) is recommended for detection of GluRS 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).

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

Suitable for use as control antibody for GluRS siRNA (h): sc-75146, GluRS siRNA (m): sc-75147, GluRS shRNA Plasmid (h): sc-75146-SH, GluRS shRNA Plasmid (m): sc-75147-SH, GluRS shRNA (h) Lentiviral Particles: sc-75146-V and GluRS shRNA (m) Lentiviral Particles: sc-75147-V.

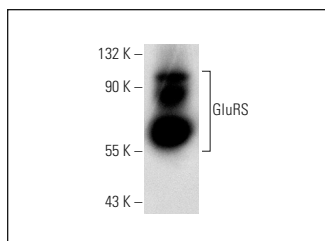
Molecular Weight of GluRS: 59 kDa.

Positive Controls: mouse testis extract: sc-2405.

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



GluRS (H-300): sc-98540. Western blot analysis of GluRS expression in mouse testis tissue extract.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **GluRS (G-1): sc-271728**, our highly recommended monoclonal alternative to GluRS (H-300).