

GlyRS (H-300): sc-98614

BACKGROUND

The fidelity of protein synthesis requires efficient discrimination of amino acid substrates by aminoacyl-tRNA synthetases. Proteins belonging to this family function to catalyze the aminoacylation of tRNAs by their corresponding amino acids, thus linking amino acids with tRNA-contained nucleotide triplets. GlyRS (Glycyl-tRNA synthetase), also known as Glycine-tRNA ligase, is a 739 amino acid class II synthetase that is widely expressed, including in the brain and spinal cord. Defects in the gene encoding GlyRS is the cause of Charcot-Marie-Tooth disease type 2D (CMT2D), which is an autosomal dominant inherited disease characterized by severe weakness, atrophy and absence of deep tendon reflexes in the upper extremities. Defects in the GlyRS gene is also the cause of distal hereditary muscular neuropathy type V (HMN5), a disease similar to CMT2D, though the distal sensory involvement is less severe in HMN5 patients.

CHROMOSOMAL LOCATION

Genetic locus: GARS (human) mapping to 7p14.3; Gars (mouse) mapping to 6 B3.

SOURCE

GlyRS (H-300) is a rabbit polyclonal antibody raised against amino acids 440-732 mapping at the C-terminus of GlyRS 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.

STORAGE

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

APPLICATIONS

GlyRS (H-300) is recommended for detection of GlyRS 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Suitable for use as control antibody for GlyRS siRNA (h): sc-75153, GlyRS siRNA (m): sc-75154, GlyRS shRNA Plasmid (h): sc-75153-SH, GlyRS shRNA Plasmid (m): sc-75154-SH, GlyRS shRNA (h) Lentiviral Particles: sc-75153-V and GlyRS shRNA (m) Lentiviral Particles: sc-75154-V.

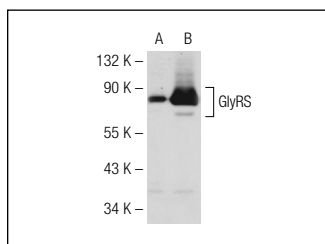
Molecular Weight of GlyRS: 75-80 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or GlyRS (m): 293T Lysate: sc-120534.

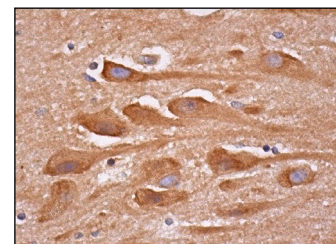
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



GlyRS (H-300): sc-98614. Western blot analysis of GlyRS expression in non-transfected: sc-117752 (A) and mouse GlyRS transfected: sc-120534 (B) 293T whole cell lysates.



GlyRS (H-300): sc-98614. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells and glial cells.

SELECT PRODUCT CITATIONS

- Andreev, D.E., et al. 2012. Glycyl-tRNA synthetase specifically binds to the poliovirus IRES to activate translation initiation. *Nucleic Acids Res.* 40: 5602-5614.
- Cantarero, L., et al. 2015. VRK1 regulates Cajal body dynamics and protects coilin from proteasomal degradation in cell cycle. *Sci. Rep.* 5: 10543.

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.



Try **GlyRS (D-10): sc-365311** or **GlyRS (H-1): sc-271778**, our highly recommended monoclonal alternatives to GlyRS (H-300).