

# GlnRS (H-263): sc-98542

## BACKGROUND

Aminoacyl-tRNA synthetases function to catalyze the aminoacylation of tRNAs by their corresponding amino acids, thus linking amino acids with tRNA-contained nucleotide triplets. GlnRS (glutaminyl-tRNA synthetase), also known as QARS, is a 775 amino acid member of the class I aminoacyl-tRNA synthetase family. Localized to the cytoplasm, GlnRS is part of a multi-protein complex composed of nine aminoacyl-tRNA synthetases that are specific for nine amino acids, namely Arg, Asp, Glu, Gln, Ile, Leu, Lys, Met and Pro. In this complex, GlnRS functions to catalyze the ATP-dependent conversion of L-Glutamine<sup>Gln</sup> and tRNA<sup>Gln</sup> to Gln-tRNA<sup>Gln</sup>. While GlnRS is used to synthesize Gln-tRNA<sup>Gln</sup> in many eukaryotic cells, prokaryotes and organelles, such as mitochondria and chloroplasts, can synthesize Gln-tRNA<sup>Gln</sup> in a two step process involving misacylation and amidation reactions.

## CHROMOSOMAL LOCATION

Genetic locus: QARS (human) mapping to 3p21.31; Qars (mouse) mapping to 9 F2.

## SOURCE

GlnRS (H-263) is a rabbit polyclonal antibody raised against amino acids 513-775 mapping at the C-terminus of GlnRS 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.

## RESEARCH USE

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

## APPLICATIONS

GlnRS (H-263) is recommended for detection of GlnRS 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).

GlnRS (H-263) is also recommended for detection of GlnRS in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GlnRS siRNA (h): sc-75144, GlnRS siRNA (m): sc-75145, GlnRS shRNA Plasmid (h): sc-75144-SH, GlnRS shRNA Plasmid (m): sc-75145-SH, GlnRS shRNA (h) Lentiviral Particles: sc-75144-V and GlnRS shRNA (m) Lentiviral Particles: sc-75145-V.

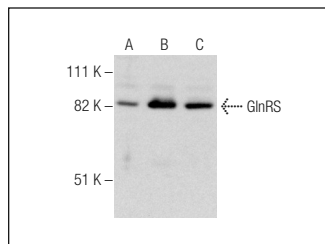
Molecular Weight of GlnRS: 88 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HL-60 whole cell lysate: sc-2209.

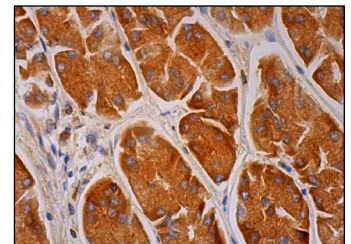
## RECOMMENDED SECONDARY REAGENTS

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



GlnRS (H-263): sc-98542. Western blot analysis of GlnRS expression in Jurkat (A), K-562 (B) and HL-60 (C) whole cell lysates.



GlnRS (H-263): sc-98542. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

## PROTOCOLS

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

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Try **GlnRS (C-1): sc-271078** or **GlnRS (F-4): sc-166241**, our highly recommended monoclonal alternatives to GlnRS (H-263).