

GARS Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP7952b**Specification**

GARS Antibody (C-term) Blocking Peptide - Product Information

Primary Accession [P41250](#)
Other Accession [NP_002038](#)

GARS Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 2617

Other Names

Glycine--tRNA ligase, Diadenosine tetraphosphate synthetase, AP-4-A synthetase, Glycyl-tRNA synthetase, GlyRS, GARS

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP7952b](/products/AP7952b) was selected from the C-term region of human GARS. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GARS Antibody (C-term) Blocking Peptide - Protein Information

Name GARS1 ([HGNC:4162](#))

Synonyms GARS

Function

Catalyzes the ATP-dependent ligation of glycine to the 3'-end of its cognate tRNA, via the formation of an aminoacyl-adenylate intermediate (Gly-AMP) (PubMed: [17544401](http://www.uniprot.org/citations/17544401), PubMed: [28675565](http://www.uniprot.org/citations/28675565), PubMed: [24898252](http://www.uniprot.org/citations/24898252)). Also produces diadenosine tetraphosphate (Ap4A), a universal pleiotropic signaling molecule needed for cell regulation pathways, by direct condensation of 2 ATPs. Thereby, may play a special role in Ap4A homeostasis (PubMed: [19710017](http://www.uniprot.org/citations/19710017))

target="_blank">19710017).

Cellular Location

Cytoplasm. Cell projection, axon. Secreted {ECO:0000250|UniProtKB:Q9CZD3}. Secreted, extracellular exosome {ECO:0000250|UniProtKB:Q9CZD3}. Note=In transfected COS7 cells, not detected in mitochondria, nor in Golgi apparatus (PubMed:17035524) Secreted by motor neuron, possibly through the exosome pathway (By similarity). {ECO:0000250|UniProtKB:Q9CZD3, ECO:0000269|PubMed:17035524} [Isoform 2]: Cytoplasm. Cell projection, axon

Tissue Location

Widely expressed, including in brain and spinal cord. [Isoform 1]: Expressed in brain, spinal cord, muscle, heart, spleen and liver.

GARS Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

GARS Antibody (C-term) Blocking Peptide - Images**GARS Antibody (C-term) Blocking Peptide - Background**

GARS is a glycyl-tRNA synthetase, one of the aminoacyl-tRNA synthetases that charge tRNAs with their cognate amino acids. This protein is an (alpha)₂ dimer which belongs to the class II family of tRNA synthetases. The protein has been shown to be a target of autoantibodies in the human autoimmune diseases, polymyositis or dermatomyositis.

GARS Antibody (C-term) Blocking Peptide - References

Shiba K., Schimmel P.J. Biol. Chem. 269:30049-30055(1994) Antonellis A., Ellsworth R.E. Am. J. Hum. Genet. 72:1293-1299(2003)