

GARS Antibody

Purified Mouse Monoclonal Antibody (Mab) Catalog # AW5653

Specification

GARS Antibody - Product Information

Application Primary Accession Reactivity Host Clonality Calculated MW Isotype Antigen Source WB, FC,E <u>P41250</u> Human Mouse Monoclonal H=83;M=82;R=72 KDa IgG1,ĸ HUMAN

GARS Antibody - Additional Information

Gene ID 2617

Antigen Region 15-305

Other Names Glycine--tRNA ligase, 6.1.1.14, Diadenosine tetraphosphate synthetase, AP-4-A synthetase, Glycyl-tRNA synthetase, GlyRS, GARS

Dilution WB~~1:1000 FC~~1:25

Target/Specificity

This GARS antibody is generated from a mouse immunized with a recombinant protein between 15-305 amino acids from human GARS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions GARS Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GARS Antibody - Protein Information

Name GARS1 (<u>HGNC:4162</u>)

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, PubMed:24898252, PubMed:28675565). 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).

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 - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>
- **GARS Antibody Images**

	4:18 4 4 5 6 6 1 13 6 1
250	-1
130 95 72 55	- - -
36 28	=
17	

All lanes : Anti-GARS Antibody at 1:1000 dilution Lane 1: HT-1080 whole cell lysate Lane 2: Jurkat



whole cell lysate Lane 3: Ramos whole cell lysate Lane 4: PC-3 whole cell lysate Lane 5: mouse brain lysate Lysates/proteins at 15 μ g per lane. Secondary Goat Anti-mouse lgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 83 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Overlay histogram showing Hela cells stained with AW5653(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AW5653, 1:25 dilution) for 60 min at 37° C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OJ192088) at 1/200 dilution for 40 min at 37° C. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

GARS Antibody - Background

Catalyzes the attachment of glycine to tRNA(Gly). Is also able produce diadenosine tetraphosphate (Ap4A), a universal pleiotropic signaling molecule needed for cell regulation pathways, by direct condensation of 2 ATPs.

GARS Antibody - References

Shiba K.,et al.J. Biol. Chem. 269:30049-30055(1994). Williams J.H.,et al.Nucleic Acids Res. 23:1307-1310(1995). Ota T.,et al.Nat. Genet. 36:40-45(2004). Hillier L.W.,et al.Nature 424:157-164(2003). Ge Q.,et al.J. Biol. Chem. 269:28790-28797(1994).