

**KD-Validated Anti-GARS Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI1521****Specification****KD-Validated Anti-GARS Rabbit Monoclonal Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P41250</a>
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 83 kDa, observed, 75 kDa kDa
Gene Name	GARS1
Aliases	GARS1; Glycyl-TRNA Synthetase 1; GlyRS; DSMAV; SMAD1; GARS; Diadenosine Tetraphosphate Synthetase; Charcot-Marie-Tooth Neuropathy 2D; Glycyl-TRNA Synthetase; Glycine--TRNA Ligase; Ap4A Synthetase; EC 6.1.1.14; CMT2D; Charcot-Marie-Tooth Neuropathy, Neuronal Type, D; Glycine TRNA Ligase; AP-4-A Synthetase; EC 2.7.7.-; HMN5A; SMAJI; GLYRS; HMN5
Immunogen	A synthesized peptide derived from human GARS

**KD-Validated Anti-GARS Rabbit Monoclonal Antibody - Additional Information**

Gene ID	2617
Other Names	Glycine--tRNA ligase, 6.1.1.14, Diadenosine tetraphosphate synthetase, Ap4A synthetase, 2.7.7.-, Glycyl-tRNA synthetase, GlyRS, Glycyl-tRNA synthetase 1 {ECO:0000312 HGNC:HGNC:4162}, GARS1 ( <a href="http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=4162" target="_blank">http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=4162</a> ), GARS

**KD-Validated Anti-GARS Rabbit Monoclonal Antibody - 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:[24898252](http://www.uniprot.org/citations/24898252), PubMed:[28675565](http://www.uniprot.org/citations/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:<a href="http://www.uniprot.org/citations/19710017" target="\_blank">19710017</a>).

#### 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

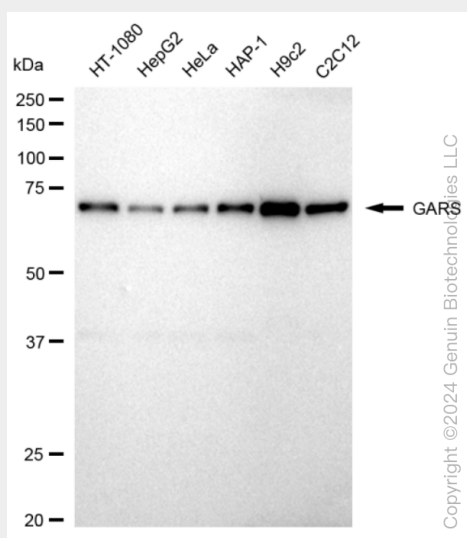
Widely expressed, including in brain and spinal cord. [Isoform 1]: Expressed in brain, spinal cord, muscle, heart, spleen and liver.

### KD-Validated Anti-GARS Rabbit Monoclonal Antibody - Protocols

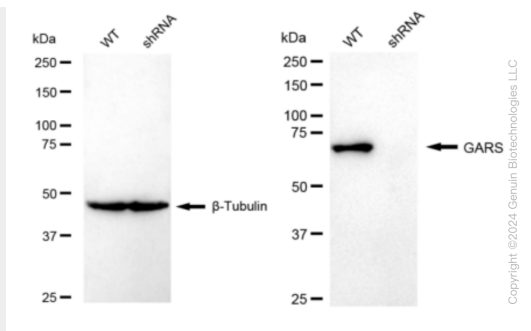
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### KD-Validated Anti-GARS Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-GARS antibody (Cat#AGI1521). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-GARS antibody (Cat#AGI1521, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-GARS antibody (Cat#AGI1521). GARS expression in wild type (WT) and GARS shRNA knockdown (KD) HeLa cells with 30  $\mu$ g of total cell lysates.  $\beta$ -Tubulin serves as a loading control. The blot was incubated with anti-GARS antibody (Cat#AGI1521, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.