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GARS Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7952b

Product Information

Application	WB, E
Primary Accession	P41250
Other Accession	NP_002038
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB11217
Calculated MW	83166
Antigen Region	706-739

Additional Information

Gene ID	2617
Other Names	Glycine--tRNA ligase, Diadenosine tetraphosphate synthetase, AP-4-A synthetase, Glycyl-tRNA synthetase, GlyRS, GARS
Target/Specificity	This GARS antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 706-739 amino acids from the C-terminal region of human GARS.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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, 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.

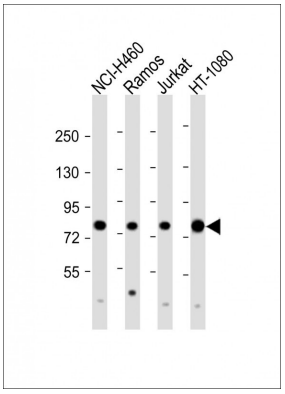
Background

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.

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)

Images



All lanes : Anti-GARS Antibody (C-term) at 1:2000 dilution Lane 1: NCI-H460 whole cell lysate Lane 2: Ramos whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: HT-1080 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 83 kDa Blocking/Dilution buffer: 5% NFDM/TBST.