Recombinant Human GARS, GST-tagged

Cat. No. GARS-13158H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GARS protein, fused to GST-tag, was expressed in E.coli and purified by GSH-sepharose.
Species	Human
Source	E.coli
ProteinLength	390-739a.a.
Description	Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. These enzymes function in the detoxification of electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins and products of oxidative stress, by conjugation with glutathione. The genes encoding these enzymes are known to be highly polymorphic. These genetic variations can change an individuals susceptibility to carcinogens and toxins as well as affect the toxicity and efficacy of some drugs. At present, eight distinct classes of the soluble cytoplasmic mammalian glutathione S-transferases have been identified: alpha, kappa, mu, omega, pi, sigma, theta and zeta. This gene encodes a glutathione S-tranferase belonging to the alpha class. The alpha class genes, located in a cluster mapped to chromosome 6, are the most abundantly expressed glutathione S-transferases in liver. In addition to metabolizing bilirubin and certain anti-cancer drugs in the liver, the alpha class of these enzymes exhibit glutathione peroxidase activity thereby protecting the cells from reactive oxygen species and the products of peroxidation.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Storage	The protein is stored in PBS buffer at -20℃. Avoid repeated freezing and thawing cycles.
Storage Buffer	1M PBS (58mM Na2HPO4,17mM NaH2PO4, 68mM NaCl, pH8.) added with 100mM GSH and 1% Triton X-100,15%glycerol.

GENE INFORMATION

Gene Name	GARS glycyl-tRNA synthetase [Homo sapiens]
Official Symbol	GARS
Synonyms	GARS; glycyl-tRNA synthetase; Charcot Marie Tooth neuropathy 2D , CMT2D; glycine--tRNA ligase; DSMAV; glycine tRNA ligase; GlyRS; SMAD1; AP-4-A synthetase; Charcot-Marie-Tooth neuropathy 2D; diadenosine tetraphosphate synthetase; Charcot-Marie-Tooth neuropathy, neuronal type, D; HMN5; CMT2D;
Gene ID	2617
mRNA Refseq	NM_002047
Protein Refseq	NP_002038
MIM	600287
UniProt ID	P41250
Chromosome Location	7p15
Pathway	Aminoacyl-tRNA biosynthesis, organism-specific biosystem; Aminoacyl-tRNA

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	biosynthesis, conserved biosystem; Aminoacyl-tRNA biosynthesis, eukaryotes, organism-specific biosystem; Aminoacyl-tRNA biosynthesis, eukaryotes, conserved biosystem; Cytosolic tRNA aminoacylation, organism-specific biosystem; Gene Expression, organism-specific biosystem; Mitochondrial tRNA aminoacylation, organism-specific biosystem;
Function	ATP binding; glycine-tRNA ligase activity; glycine-tRNA ligase activity; ligase activity; nucleotide binding; protein dimerization activity;

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