

Recombinant Human QARS Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. QARS-6576H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	QARS MS Standard C13 and N15-labeled recombinant protein (NP_005042) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	Aminoacyl-tRNA synthetases catalyze the aminoacylation of tRNA by their cognate amino acid. Because of their central role in linking amino acids with nucleotide triplets contained in tRNAs, aminoacyl-tRNA synthetases are thought to be among the first proteins that appeared in evolution. In metazoans, 9 aminoacyl-tRNA synthetases specific for glutamine (gln), glutamic acid (glu), and 7 other amino acids are associated within a multienzyme complex. Although present in eukaryotes, glutaminyl-tRNA synthetase (QARS) is absent from many prokaryotes, mitochondria, and chloroplasts, in which Gln-tRNA(Gln) is formed by transamidation of the misacylated Glu-tRNA(Gln). Glutaminyl-tRNA synthetase belongs to the class-I aminoacyl-tRNA synthetase family. Alternative splicing results in multiple transcript variants.
Molecular Mass	87.8 kDa
AA Sequence	MAALDSLFLFTSLGLSEQKARETLKNSALSAQLREAATQAQQLTGSTIDKATGILLYG LASRLRDTRRLSFLVSYIASKKIHTPEQLSAALEYVRSHPLDPIDTVDFERECGVGVIV

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TPEQIEEAVEAAINRHRPQLLVERYHFNMGLLMGEARAVLKWADGKMIKNEVDMQV
 LHLLGPKLEADLEKKFKVAKARLEETDRRTAKDVVENGETADQTLSEQLRGEALK
 FHKPGENYKTPGYVVTPTMTNLLKQHLEITGGQVTRFPPEPNGILHIGHAKAINFNF
 GYAKANNGICFLRFDDTNPEKEEAKFFTAICDMVAWLGYTPYKVITYASDYFDQLYA
 WAVELIRRGLEYVCHQRGEELKGHNTLPSPWRDRPMEESLLLFEAMRKGFSEGE
 ATLRLMKLVMEDGKMDPVAYRVKYTPHHRTGDKWCIYPTYDYTHCLCDSIEHITHSLC
 TKEFQARRSSYFWLCNALDVYCPVQWEYGRNLNHYAVVSKRKILQLVATGAVRDW
 DDPRLFTLTALRRRGFPPEAINNFCAVGVTVTAQTTMEPHLLEACVRDVLNDTAPRA
 MAVLESLRVIITNFPAAKSLDIQVPNFPADETKGFHQVFPFAPIVFIERTDFKEEPEPGF
 KRLAWGQPVGRLRHTGYVIELQHVVKGPSGCVESLEVTCRRADAGEKPKAFIHVWS
 QPLMCEVRLYERLFQHKNPEDPTEVPGGFLSDLNLASLHVDAALVDCSVALAKPF
 DKFQFERLGYSVDPDSHQGKLVFNRTVTCLKEDPGKVTRTRPLEQKLISEEDLAAND
 ILDYKDDDDKV

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name QARS glutaminyl-tRNA synthetase [Homo sapiens (human)]

Official Symbol QARS

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Synonyms	QARS; glutaminyl-tRNA synthetase; glutamine--tRNA ligase; glutamine tRNA ligase; glutamine-tRNA synthetase; GLNRS; PRO2195;
Gene ID	5859
mRNA Refseq	NM_005051
Protein Refseq	NP_005042
MIM	603727
UniProt ID	P47897
SDS-PAGE	