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Product datasheet for TP726925

Lysyl tRNA synthetase (KARS) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant Human Lysine--tRNA Ligase/KARS (C-6His)
Species:	Human
Expression cDNA Clone or AA Sequence:	Ala2-Val597
Tag:	C-His
Buffer:	Supplied as a 0.2 um filtered solution of 20mM Tris-HCl, 100mM NaCl, 1mM DTT, 20% Glycerol, pH 8.0.
Note:	Recombinant Human Lysine--tRNA Ligase is produced by our Mammalian expression system and the target gene encoding Ala2-Val597 is expressed with a 6His tag at the C-terminus.
Stability:	12 months from date of despatch
Locus ID:	3735
UniProt ID:	Q15046
Summary:	Lysine-tRNA ligase, also known as Lysyl-tRNA synthetase, LysRS, KARS and KIAA0070, belongs to the class-II aminoacyl-tRNA synthetase family. The N-terminal cytoplasmic domain (1-65) is a functional tRNA-binding domain, which is required for nuclear localization, is involved in the interaction with DARS, but has a repulsive role in the binding to EEF1A1. A central domain (208-259) is involved in homodimerization and is required for interaction with HIV-1 GAG and incorporation into virions. KARS catalyzes the specific attachment of an amino acid to its cognate tRNA in a two step reaction: the amino acid (AA) is first activated by ATP to form AA-AMP and then transferred to the acceptor end of the tRNA. Defects in KARS are the cause of Charcot-Marie-Tooth disease recessive intermediate type B (CMTRIB).

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