



Recombinant Protein Technical Manual

Recombinant Human KARS Protein (His Tag)

RPES3912

Product Data:

Product SKU: RPES3912

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: Q15046

Protein Information:

Molecular Mass: 69.1 kDa

AP Molecular Mass: 65 kDa

Tag: C-6His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

Shipping: This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.

Formulation: Supplied as a 0.2 µm filtered solution of 20mM TrisHCl, 150mM NaCl, 1mM DTT, 20% glycerol, pH 8.0.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Lysine--tRNA Ligase; Lysyl-tRNA Synthetase; LysRS; KARS; KIAA0070

Immunogen Information:

Sequence: Ala2-Val597

Background:

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 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).