

# Recombinant Human KARS Protein (His Tag)

Catalog Number:PKSH032720



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

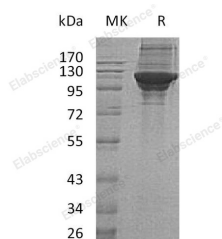
## Description

<b>Synonyms</b>	Lysine--tRNA Ligase;Lysyl-tRNA Synthetase;LysRS;KARS;KIAA0070
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Ala2-Val597
<b>Accession</b>	Q15046
<b>Calculated Molecular Weight</b>	69.1 kDa
<b>Observed molecular weight</b>	70-90 kDa
<b>Tag</b>	C-His

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
<b>Shipping</b>	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.
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution of 20mM Tris-HCl, 100mM NaCl, 1mM DTT, 20% Glycerol, pH 8.0.
<b>Reconstitution</b>	Not Applicable

## Data



> 95 % as determined by reducing SDS-PAGE.

## 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-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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