

# Recombinant human KARS protein

Catalog Number: ATGP1166

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

63-597aa

### UniProt No.

Q15046

### NCBI Accession No.

NP\_005539

### Alternative Names

Lysyl-tRNA synthetase, CMTRIB, KARS2, KIAA0070, KRS

## PRODUCT SPECIFICATION

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### Molecular Weight

63.7 kDa (558aa)

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 0.1M NaCl, 1mM DTT

### Purity

> 95% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

KARS, also known as Lysyl-tRNA synthetase, belongs to the class-II aminoacyl-tRNA synthetase family. It exists as both mitochondrial and cytoplasmic isoforms produced by alternative splicing, and thought to play a role in autoimmune diseases, such as polymyositis or dermatomyositis. This protein functions to catalyze the aminoacylation of tRNAs by their corresponding amino acids, thus linking amino acids with tRNA-contained nucleotide triplets. Recombinant human KARS protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography.

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## Amino acid Sequence

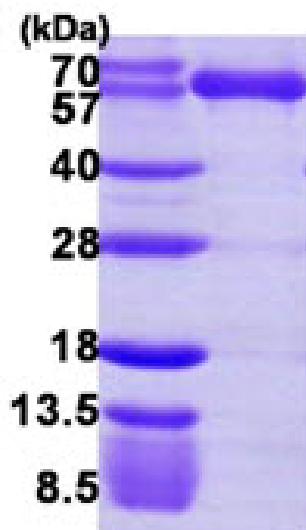
MGSSHHHHHH SSSLVPRGSH MGSGVGP EEE SVDPNQYYKI RSQAIHQ LKV NGEDPYPHKF HVDISLTDI QKYSHLQPGD  
HLTDITLQVA GRIHAKRASG GKLIFYDLRG EGVKLQVMAN SRNYKSEEEF IHINNKLRG DIIGVQGNPG KTKKGELSII  
PYEITLLSPC LHMLPHLHFG LKDKETRYRQ RYLDLILNDF VRQKFIIRSK IITYIRSFLD ELGFLEIETP MMNIIPGGAV  
AKPFITYHNE LDMNLYMRIA PELYHKMLVV GGIDRVYEIG RQFRNEGIDL THNPEFTTCE FYMAYADYHD LMEITEKMVS  
GMVKHITGSY KVTYHPDGPE GQAYDVDFTP PFRRINMVEE LEKALGMKLP ETNLFETEET RKILDDICVA KAVECPPPRT  
TARLLDKLVG EFLEVTCINP TFICDHPQIM SPLAKWHRSK EGLTERFELF VMKKEICNAY TELNDPMRQR QLFEEQAKAK  
AAGDDEAMFI DENFCTALEY GLPPTAGWGM GIDRVAMFLT DSNNIKEVLL FPAMKPEDKK ENVATDTTLE STTVGTSV

## General References

Targoff I.N. et al. (1993) J. Clin. Invest. 91: 2556-2564.  
Tolkunova E. et al. (2000) J. Biol. Chem. 275: 35063-35069.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)