

**KARS, 63-597aa, Human, His, E.coli**

**Cat.NO.: TP02714**

3th Edition

**Synonyms:** Lysyl-tRNA synthetase, CMTRIB, KARS2, KIAA0070, KRS.

**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.

**Form:** Liquid. 20mM Tris-HCl buffer (pH8.0) containing 20% glycerol 0.1M NaCl, 1mM DTT

**Molecular Weight:** 63.7 kDa (558aa)

**Sequences:**

MGSSHHHHHHSSGLVPRGSHMGSGVGPEEESVDPNQYYKIRSQAIIHQLKVNGEDPYPHKFHVDISLTDIFIQKYSH  
LQPGDHLTDITLKVAGRIHAKRASGGKLIFYDLRGEGVKLQVMANSRNYKSEEEFIHINNKLRRGDIIGVQGNPGKTK  
KGELSIIPYEITLLSPCLHMLPHLHFGLKDKETRYRQRYLDLILNDFVRQKFIIRSKIITYIRSFLDELGFLEIETPMMNIIP  
GGAVAKPFITYHNELDMNLYMRIAPELYHKMLVVGIDRVYEIGRQFRNEGIDLTHNPEFTTCEFYMAYADYHDLME  
ITEKMOVSGMVKHITGSYKVITYHPDGPEGQAYDVDFTPPFRRINMVEELEKALGMKLPETNLFETEETRKILDDICVAK  
AVECPPPRTTARLLDKLVGEFLEVTCINPTFICDHPQIMSPKAKWHRSEKGLTERFELFVMKKEICNAYTELNDPMR  
QRQLFEEQAKAKAAGDDEAMFIDENFCTALEYGLPPTAGWGMGIDRVAMFLTDSNNIKEVLLFPAMKPEDKKENVA  
TTDTLESTTVGTSV

**Purity:** > 95% by HPLC

**Concentration:** 1.0 mg/ml (determined by Bradford assay)

**Endotoxin Level:** <1.0 EU per 1 ug of protein (determined by LAL method)

**Storage:** Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.