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## Product Data Sheet

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Product Name: KARS Human

Cat. No.: GP21834

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Lysine--tRNA ligase; Lysyl-tRNA synthetase; LysRS; KARS; KIAA0070; KRS; KARS2; CMTRIB.		
Amino Acid Sequence	<p>MGSSHHHHHH SGLVPRGSH MSGVGPEEE SVDPNQYYKI RSQAIHQLKV          NGEDPYPHKF HVDISLTDFI QKYSHLQPGD HLTDTLKVA 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 ENVATTDLE          STTVGTSV.</p>		
Formulation	KARS protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH8.0), 20% glycerol, 0.1M NaCl and 1mM DTT.		

**Introduction**

Lysyl-tRNA synthetase (KARS) is a member of the class-II aminoacyl-tRNA synthetase family. KARS exists as both mitochondrial and cytoplasmic isoforms produced by alternative splicing, and believed to have a role in autoimmune diseases, such as polymyositis or dermatomyositis. The KARS protein functions to catalyze the aminoacylation of tRNAs by their corresponding amino acids, so linking amino acids with tRNA-contained nucleotide triplets.

**Stability**

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

KARS Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 558 amino acids (63-597 a.a.) and having a molecular mass of 63.7kDa. KARS is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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