Recombinant SYLC protein (His tag)

Catalog Number	543793
Synonyms	Leucyl-tRNA synthetase; LeuRS; cLRS
Species	Human
Expression System	E. coli
Accession	Q9P2J5
Molecular Weight	Predictes a molecular mass of 15.26 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	1-118
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-118 aa (Q9P2J5) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Leucine--tRNA Ligase, Cytoplasmic (LARS1) Fragment (1-118) is a high-purity protein fragment engineered for stability and solubility, ideal for structural studies and biochemical assays investigating leucyl-tRNA synthetase function. Leucine--tRNA ligase, cytoplasmic (LARS1) is an essential aminoacyl-tRNA synthetase that catalyzes the ATP-dependent attachment of leucine to its cognate tRNA, ensuring accurate protein synthesis. It performs a two-step reaction involving leucyl-adenylate intermediate formation and transfer to tRNA, while also hydrolyzing misactivated intermediates and mischarged tRNAs to maintain fidelity. Located in the cytoplasm, this enzyme plays a critical role in translational accuracy and cellular metabolism.