Recombinant SYSM protein (His tag)

Catalog Number	546015
Synonyms	SerRSmt; Seryl-tRNA synthetase; SerRS; Seryl-tRNA(Ser/Sec) synthetase
Species	Human
Expression System	E. coli
Accession	Q9NP81
Molecular Weight	Predictes a molecular mass of 55.43 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	40-518
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 40-518 aa (Q9NP81) 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	This product is a high-quality recombinant protein fragment of human Serine--tRNA ligase, mitochondrial (SerRSmt), encompassing residues 40-518. It is designed for structural and biochemical studies, offering a stable and soluble unit that retains relevance for investigating mitochondrial tRNA charging and selenocysteine biosynthesis pathways. The full-length Serine--tRNA ligase, mitochondrial (EC 6.1.1.11), encoded by the SARS2 gene in Homo sapiens, catalyzes the attachment of serine to tRNA(Ser) and is implicated in aminoacylating tRNA(Sec) to form misacylated tRNA L-seryl-tRNA(Sec), a precursor for selenocysteinyl-tRNA(Sec) synthesis. This enzyme localizes to the mitochondrial matrix, where it supports protein synthesis and selenium incorporation into proteins, highlighting its critical role in mitochondrial function and cellular metabolism.