Recombinant SYSC protein (His tag)

Catalog Number	544647
Synonyms	Seryl-tRNA synthetase; SerRS; Seryl-tRNA(Ser/Sec) synthetase
Species	Human
Expression System	E. coli
Accession	P49591
Molecular Weight	Predictes a molecular mass of 56.49 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 62 kDa band.

Product Information

Sequence Region	1-479
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 1-479 aa (P49591) 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 Serine--tRNA ligase, cytoplasmic (SerRS) fragment (residues 1-479) is a high-purity, stable protein designed for structural and biochemical studies. This fragment retains key functional regions, making it ideal for investigating aminoacylation mechanisms and nuclear regulatory roles in angiogenesis. Serine--tRNA ligase (Seryl-tRNA synthetase) catalyzes the ATP-dependent attachment of serine to tRNA(Ser) and is implicated in tRNA(Sec) misacylation, contributing to selenocysteine incorporation. Beyond its canonical cytoplasmic role in translation, it localizes to the nucleus where it binds the VEGFA promoter, recruits SIRT2 for histone H4K16 deacetylation, and suppresses MYC-mediated transcriptional activation of VEGFA, thereby inhibiting sprouting angiogenesis. This dual functionality underscores its significance in protein synthesis and vascular biology.