

Recombinant Human SYYC Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50942

Size: 10ug, 100ug

Protein Name: Tyrosine--tRNA ligase, cytoplasmic (EC 6.1.1.1) (Tyrosyl-tRNA synthetase) (TyrRS) [Cleaved into: Tyrosine--tRNA ligase, cytoplasmic, N-terminally processed]

Synonym: YARS1, YARS

UniProt ID: P54577

UniProt Link: www.uniprot.org/uniprotkb/P54577/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 528 AA

Molecular Weight: 59 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGDAPSPEEKHLHLITRNLQEVLGEEKLKEILKERELKIYWGTATTGKPHVAYFVPMISKIADFLKAGCE
VTILFADLHAYLDNMKAPWELLELRVSYENVIKAMLESIGVPLEKLKFIKGTDYQLSKEYTLDVYRLS
SVVTQHDSKKAGAEVVKQVEHPLL SGLLYPGLQALDEEYLVKVD AQFGGIDQRKIFTFAEKYLPALGY
SKRVHLMNPMVPGLTGSKMSSSEESKIDLLDRKEDVKKKLKKAFCPEPGNVENNGVLSFIKHVLFPL
KSEFVILRDEKWGGNKTYTAYVDLEKDFAAEVVHPGDLKNSVEVALNKLLDPIREKFNTPALKKLASA
AYPDPSKQKPMAGPAKNSEPEEVIPSRDLIRVGKIITVEKHPDADSLYVEKIDVGEAEPRTVVSGLV
QFVPKEELQDRLVVVLCNLKPQKMRGVESQGMLLCASIEGINRQVEPLDPPAGSAPGEHVFVKGYE
KGQPDEELKPKKKVFEKLQADFKISEECIAQWKQTNFMTKLGSISCKSLKGGNIS

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Tyrosine--tRNA ligase, cytoplasmic (EC 6.1.1.1) (Tyrosyl-tRNA synthetase) (TyrRS) [Cleaved into: Tyrosine--tRNA ligase, cytoplasmic, N-terminally processed] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Tyrosine--tRNA ligase that catalyzes the attachment of tyrosine to tRNA(Tyr) in a two-step reaction: tyrosine is first activated by ATP to form Tyr-AMP and then transferred to the acceptor end of tRNA(Tyr) (Probable) (PubMed:25533949). Also acts as a positive regulator of poly-ADP-ribosylation in the nucleus, independently of its tyrosine--tRNA ligase activity (PubMed:25533949). Activity is switched upon resveratrol-binding: resveratrol strongly inhibits the tyrosine--tRNA ligase activity and promotes relocalization to the nucleus, where YARS1 specifically stimulates the poly-ADP-ribosyltransferase activity of PARP1 (PubMed:25533949).

Subcellular Localization: Cytoplasm . Nucleus . Note=Cytoplasmic in normal conditions (PubMed:25533949). Resveratrol-binding in response to serum starvation promotes relocalization to the nucleus (PubMed:25533949).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.