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Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP7580a

Specification

Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide - Product Information

Primary Accession P54577

Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide - Additional Information

Gene ID 8565

Other Names
Tyrosine--tRNA ligase, cytoplasmic, Tyrosyl-tRNA synthetase, TyrRS, Tyrosine--tRNA ligase, cytoplasmic, N-terminally processed, YARS

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7580a was selected from the N-term region of human YARS. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide - Protein Information

Name YARS1 (HGNC:12840)

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).

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

Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide - Images

Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide - Background

Aminoacyl-tRNA synthetases catalyze the aminoacylation of tRNA by their cognate amino acid. Because of their central role in linking amino acids with nucleotide triplets contained in tRNAs, aminoacyl-tRNA synthetases are thought to be among the first proteins that appeared in evolution. Tyrosyl-tRNA synthetase belongs to the class I tRNA synthetase family. Cytokine activities have also been observed for the human tyrosyl-tRNA synthetase, after it is split into two parts, an N-terminal fragment that harbors the catalytic site and a C-terminal fragment found only in the mammalian enzyme. The N-terminal fragment is an interleukin-8-like cytokine, whereas the released C-terminal fragment is an EMAP II-like cytokine.

Tyrosyl tRNA synthetase (YARS) Antibody (N-term) Blocking peptide - References

Yang,X.L., Chem. Biol. 14 (12), 1323-1333 (2007)Jordanova,A., Nat. Genet. 38 (2), 197-202 (2006)Bonnefond,L., Biochemistry 44 (12), 4805-4816 (2005)