

Product datasheet for **RG204590**

Tyrosyl tRNA synthetase (YARS) (NM_003680) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tyrosyl tRNA synthetase (YARS) (NM_003680) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Tyrosyl tRNA synthetase
Synonyms:	CMTDIC; TYRRS; YARS; YRS; YTS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG204590 representing NM_003680
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGGGACGCTCCAGCCCTGAAGAGAACTGCACCTTATCACCCGGAACCTGCAGGAGTTCTGGGGG
 AAGAGAAGCTGAAGGAGATACTGAAGGAGCGGAACTTAAAATTTACTGGGGAACGGCAACCACGGGCAA
 ACCACATGTGGCTTACTTTGTGCCCATGTCAAAGATTGCAGACTTCTTAAAGGCAGGGTGTGAGGTAACA
 ATTCTGTTTGGGACCTCCACGCATACCTGGATAACATGAAAGCCCCATGGGAATTCTAGAACTCCGAG
 TCAGTTACTATGAGAATGTGATCAAAGCAATGCTGGAGAGCATTGGTGTGCCCTTGGAGAAGCTCAAGTT
 CATCAAAGGCACTGATTACCAGCTCAGCAAAGAGTACACACTAGATGTGTACAGACTCTCCTCCGTGGTC
 ACACAGCAGGATCCAAGAAGGCTGGAGCTGAGGTGTAAGCAGGTGGAGCACCCCTTGGCTGAGTGGCC
 TCTTATACCCCGACTGCAGGCTTTGGATGAAGAGTATTTAAAAGTAGATGCCCAATTTGGAGGCATTGA
 TCAGAGAAAGATTTTACCTTTGCAGAGAAGTACCTCCCTGCACCTGGCTATTCAAACGGGTCCATCTG
 ATGAATCCTATGGTTCAGGATTAACAGGCAGCAAAATGAGCTCTTCAAGAGGAGTCCAAGATTGATC
 TCCTTGATCGGAAGGAGGATGTGAAGAAAAAACTGAAGAAGGCCTTCTGTGAGCCAGGAAATGTGGAGAA
 CAATGGGGTCTGTCTTTCATCAAGCATGTCTTTTTCCCTTAAGTCCGAGTTTGTGATCCTACGAGAT
 GAGAAATGGGGTGGAAACAAAACCTACACAGCTTACGTGGACCTGGAAAAGGACTTTGCTGCTGAGGTTG
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 GTTTAATACCCCTGCCCTGAAAAAACTGGCCAGCGCTGCCTACCCAGATCCCTCAAAGCAGAAGCCAATG
 GCCAAAGGCCCTGCCAAGAATTCAGAACCAGAGGAGTCCATCCCATCCCGGCTGGATACCGTGTGGGGA
 AAATCACTACTGTGGAGAAGCACCCAGATGCAGACAGCCTGTATGTAGAGAAGATTGACGTGGGGGAAGC
 TGAACCAGGACTGTGGTGAAGCGCCTGTACAGTTTCGTGCCCAAGGAGGAACTGCAGGACAGGCTGGTA
 GTGGTGTGTGCAACCTGAAACCCAGAAGATGAGAGGAGTCGAGTCCCAAGGCATGCTTCTGTGTGCTT
 CTATAGAAGGGATAAACCGCCAGGTTGAACCTCTGGACCTCCGGCAGGCTCTGCTCCTGGTGAACAGT
 GTTTGTGAAGGGCTATGAAAAGGGCCAACCAGATGAGGAGCTCAAGCCCAAGAAGAAAGTCTTCGAGAAG
 TTGCAGGCTGACTTCAAATTTCTGAGGAGTGCATCGCACAGTGGAAAGCAAACTTTCATGACCAAGC
 TGGGCTCCATTTCTGTAATCGCTGAAAGGGGGGAACATTAGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

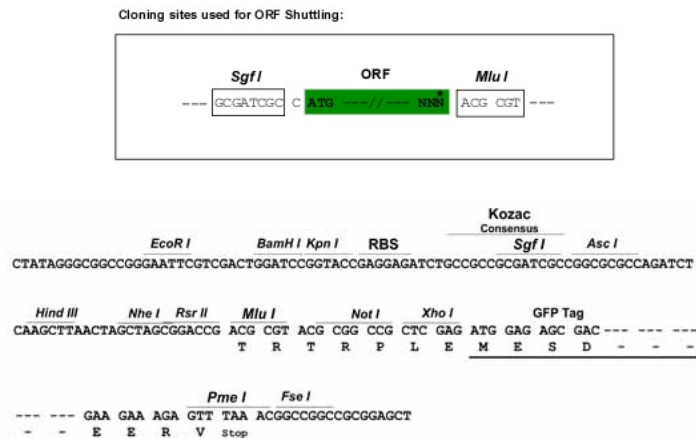
>RG204590 representing NM_003680
 Red=Cloning site Green=Tags(s)

MGDAPSPEEKHLHLITRNLQEVLGEEKLKEILKERELKIYWGATTTGKPHVAYFVPMSKIADFLKAGCEVT
 ILFADLHAYLDNMKAPWELLELRVSYENVIKAMLESIGVPLEKLFKIKGTDYQLSKEYTLDVYRLSSV
 TQHDSKKAGAENVKQVEHPLLSGLLYPGLQALDEEYLVDAQFGGIDQRKIFTFAEKYLALGYSKRVLH
 MNPMVPLTGSKMSSSEESKIDLLDRKEDVKKLKKAFCEPQNVENNGVLSFIKHLVFLPKSEFVILRD
 EKWGGNKTYTAYVDLEKDFAAEVVHPGDLKNSVEVALNKLLDPIREKFNTPALKKLASAAYPDPKQKPM
 AKGPAKNSEPEEIVPSRLDIRVGKIITVEKHPDADSLYVEKIDVGEAEPRTVVSGLVQFVPEELQDRLV
 VVLCNLKPQKMRGVESQGMLLCASIEGINRQVEPLDPPAGSAPGEHVFKGYEKQPDEELKPKKKVFEK
 LQADFKISEECIAQWKQTNFMTKLGSISSCKSLKGGNIS

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_003680

ORF Size: 1584 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_003680.3](#)

RefSeq Size: 3137 bp

RefSeq ORF: 1587 bp

Locus ID: 8565

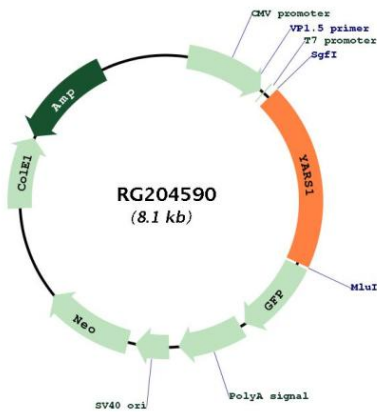
UniProt ID: [P54577](#)

Cytogenetics: 1p35.1

Domains: tRNA-synt_1b, tRNA_bind
Protein Families: Druggable Genome
Protein Pathways: Aminoacyl-tRNA biosynthesis

Gene Summary: 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. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG204590