

Product datasheet for **RC204590**

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:	Myc-DDK
Symbol:	Tyrosyl tRNA synthetase
Synonyms:	CMTDIC; TYRRS; YARS; YRS; YTS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204590 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGGACGCTCCAGCCCTGAAGAGAACTGCACCTTATCACCCGGAACCTGCAGGAGTTCTGGGGG
 AAGAGAAGCTGAAGGAGATACTGAAGGAGCGGGAACCTAAAATTTACTGGGGAACCGCAACCACGGGCAA
 ACCACATGTGGCTTACTTTGTGCCCATGTCAAAGATTGCAGACTTCTAAAGGCAGGGTGTGAGGTAACA
 ATTCTGTTTGGGACCTCCACGCATACCTGGATAACATGAAAGCCCCATGGGAACCTCTAGAACTCCGAG
 TCAGTTACTATGAGAATGTGATCAAAGCAATGCTGGAGAGCATTGGTGTGCCCTTGGAGAAGCTCAAGTT
 CATCAAAGGCACTGATTACCAGCTCAGCAAAGAGTACACACTAGATGTGTACAGACTCTCCTCCGTGGTC
 ACACAGCACGATTCCAAGAAGGCTGGAGCTGAGGTGTAAGCAGGTGGAGCACCCCTTGTCTGAGTGGCC
 TCTTATACCCCGACTGCAGGCTTTGGATGAAGAGTATTTAAAAGTAGATGCCCAATTTGGAGGCATTGA
 TCAGAGAAAGATTTTACCTTTGCAGAGAAGTACCTCCCTGCACCTGGCTATTCAAACGGGTCCATCTG
 ATGAATCCTATGGTTCAGGATTAACAGGCAGCAAAATGAGCTCTCAGAAGAGGAGTCCAAGATTGATC
 TCCTTGATCGGAAGGAGGATGTGAAGAAAAAACTGAAGAAGGCCTTCTGTGAGCCAGGAAATGTGGAGAA
 CAATGGGGTTCTGTCTTTCATCAAGCATGTCTTTTTCCCTTAAGTCCGAGTTTGTGATCCTACGAGAT
 GAGAAATGGGGTGGAAACAAAACCTACACAGCTTACGTGGACCTGGAAAAGGACTTTGTCTGAGGTTG
 TACATCCTGGAGACCTGAAGAATTTCTGTGAAGTCGCACTGAACAAGTTGCTGGATCCAATCCGGGAAAA
 GTTTAATACCCCTGCCCTGAAAAAACTGGCCAGCGCTGCCTACCCAGATCCCTCAAAGCAGAAGCCAATG
 GCCAAAGGCCCTGCCAAGAATTCAGAACCAGAGGAGTCCATCCCATCCCGGCTGGATACCGTGTGGGA
 AAATCATCACTGTGGAGAAGCACCCAGATGCAGACAGCCTGTATGTAGAGAAGATTGACGTGGGGGAAAGC
 TGAACACGGACTGTGGTGAGCGGCTGTACAGTTTCGTGCCCAAGGAGGAACTGCAGGACAGGCTGGTA
 GTGGTGTGTGCAACCTGAAACCCAGAAGATGAGAGGAGTTCGAGTCCCAAGGCATGCTTCTGTGTGCTT
 CTATAGAAGGGATAAACCAGGCTTGAACCTCTGGACCTCCGGCAGGCTCTGCTCCTGGTGGAGCAGT
 GTTTGTGAAGGGCTATGAAAAGGGCCAACCAGATGAGGAGCTCAAGCCCAAGAAGAAAGTCTTCGAGAAG
 TTGCAGGCTGACTTCAAATTTCTGAGGAGTGCATCGCACAGTGGAAAGCAAACTTTCATGACCAAGC
 TGGGCTCCATTTCTGTAATCGCTGAAAGGGGGAAACATTAGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204590 protein sequence
 Red=Cloning site Green=Tags(s)

MGDAPSPEEKHLHLITRNLQEVLGEEKLKEILKERELKIYWGATTTGKPHVAYFVPMISKIADFLKAGCEVT
 ILFADLHAYLDNMKAPWELLELRVSYENVIKAMLESIGVPLEKLFKIKGTDYQLSKEYTLDVYRLSSVY
 TQHDSKKAGAEVVKQVEHPLL SGLLYPGLQALDEEYLVDAQFGGIDQRKIFTF AEKYL PALGYSKRVHL
 MNPMVPLTGSKMSSSEESKIDLLDRKEDVKKLKKAFCEPKNVENNGVLSFIKHVLFPLKSEFVILRD
 EKWGGNKTYTAYVDLEKDFAAEVVHPGDLKNSVEVALNKLLDPIREKFNTPALKKLASAAYPDPKQKPM
 AKGPAKNSPEEVIPSRLDIRVGKIIITVEKHPDADSLYVEKIDVGEAEPRTVVSGLVQFVPKEELQDRLV
 VVLCNLKPQKMRGVESQGMLLCASIEGINRQVEPLDPPAGSAPGEHVFKGYEKQPDEELPKPKKVFVK
 LQADFKI SEECIAQWKQTNFMTKLSISCKSLKGGNIS

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6538_b01.zip

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: 3117 bp

RefSeq ORF: 1587 bp

Locus ID: 8565

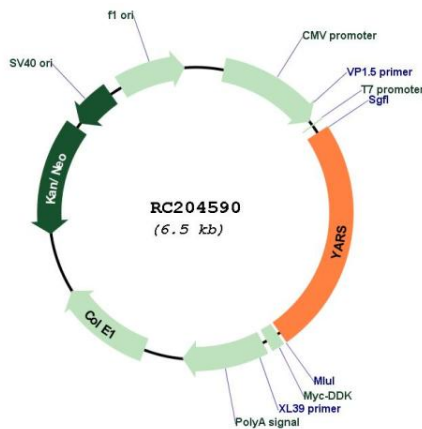
UniProt ID: [P54577](#)

Cytogenetics: 1p35.1

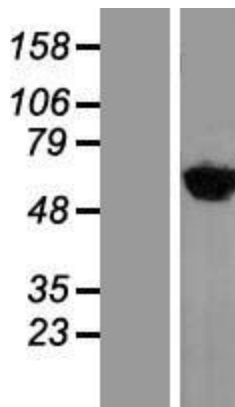
Domains: tRNA-synt_1b, tRNA_bind
Protein Families: Druggable Genome
Protein Pathways: Aminoacyl-tRNA biosynthesis
MW: 59.1 kDa

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]

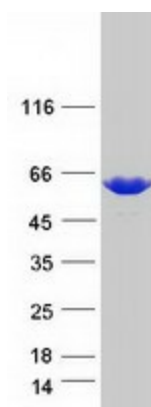
Product images:



Circular map for RC204590



Western blot validation of overexpression lysate (Cat# [LY418498]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204590 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified YARS protein (Cat# [TP304590]). The protein was produced from HEK293T cells transfected with YARS cDNA clone (Cat# RC204590) using MegaTran 2.0 (Cat# [TT210002]).