

Product datasheet for **RC204828**

YARS2 (NM_001040436) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	YARS2 (NM_001040436) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	YARS2
Synonyms:	CGI-04; MLASA2; MT-TYRRS; TYRRS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204828 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGCGCCCATCTTTCGGTCTTTCTGGGGCCGGTGGTCTGGTACCCTAAATCTCTCAGTATTGT
 TGCCTTGGGGCTGCGTAAGGCCACTCGGGCGCTCAGGGGTTACTGGCAGCGCAGAAGGCTCGAGGCT
 GTTCAAGGACTTCTCCCGGAGACGGGACGAAAATAGAGCTCCAGAGCTCTTCGACCGTGGCACGGCG
 AGTTTTCCCAAACCATTTACTGTGGCTTCGACCCACGGCAGACTCGCTTCATGTGGGTCATCTACTTG
 CGCTGCTGGGCTGTTTCATTTGCAGCGAGCGGGCCACAACGTGATCGCGCTGGTGGGAGGCCACGGC
 GCGCCTGGGAGACCCGAGCGCCGTACCAAGGAACGCGAGGCGCTGGAGACAGAGCGCTGCGAGCCAAC
 GCGCGAGCTCTGCGCCTAGGGCTTGAGGCCCTGGCGCTAATCACCAGCAGCTTTTCACTGATGGGCGCT
 CCTGGGCGAGCTTCACTGTGCTGGACAACCTCGGCTGGTACCAGAAGCAGCACCTGGTGGACTTCTGGC
 GGCAGTGGGGGTCATTCCGCATGGGGACGCTGCTGAGCCGGCAGAGCTGCAGCTGCGGCTCAAGAGC
 CCCGAGGGCATGAGCTTGGCCGAGTTCTTTACCAGGTGCTCCAGGCCTATGACTTCTATTACCTCTTCC
 AGCGTTATGGATGCAGGGTCCAGCTGGGCGGATCTGATCAACTAGGCAACATCATGTCCGGATATGAGTT
 CATCAACAAGTTGACTGGAGAAGATGTATTTGGAATCACCGTTCTCTAATTACAAGTAACTGGAGCA
 AAGCTGGGAAAGTCTGCTGGCAACGCTGTTTGGCTAAACAGAGATAAGACATCTCCATTTGAATTGTATC
 AATTCTTTGTGAGCAACCGGACGATTCAAGTGGAAAGGTACCTGAAGCTGTTCACTTTCTGCCCTTCC
 AGAGATTGATCATATCATGCAGCTGCATGTCAAGAGCCAGAAAGGCGGGTCTCAGAAACGACTGGCA
 GCAGAAGTAACAAAGCTGTTTCATGGACGAGAAGGATTGGATTCTGCTAAAAGGTGTACACAAGCCCTT
 ATCACAGTAGCATAGATGCAGTGGAGTCACTGTCTGATCAGGAGTTAAAAGAGTTGTTTAAAGAAGCTCC
 ATTTTCTGAATTTTTCTCGATCCTGGAACAAGTGTCTAGATACTTGGCGAAAGCAAATGCCATTCCA
 GATGGTCCCCGAGGGTATCGAATGATAACAGAAGCGGAGTCAGCATAAATCACCAACAAGTAAACAATC
 CTGAGAGTGTTTAATTGTTGGACAACATATTCTCAAGAATGGACTTTCCTTACTTAAAATAGGAAAAAG
 AAATTTCTACATTATAAAATGGCTTCAGTTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204828 protein sequence
 Red=Cloning site Green=Tags(s)

MAAPILRSFSWGRWSGLNLSVLLPLGLRKAHSGAQGLLAAQKARGLFKDFFPETGKIELPELFDRTA
 SFPQTIYCGFDPTADSLHVGHLALLGLFHLQRAGHNVIALLVGGATARLGDPSGRTKEREALETERVRAN
 ARALRLGLEALAAHQQLFTDGRSWGSFTVLDNSAWYQKQHLVDFLAAVGGHFRMGTLTLLSRQSVQLRLKS
 PEGMSLAEFFYQVLQAYDFYLLFQRYGCRVQLGGSDQLGNIMSGYEFINKLTGEDVFGITVPLITSTTGA
 KLKGSAGNAVWLNDRKTSPELQYFFVRQPDSDVERYLKLFTFLPLPEIDHIMQLHVKEPERRGPQKRLA
 AEVTKLVHGREGLDSAKRCTQALYHSSIDALEVMSDQELKELFKEAPFSEFFLDPGTSVLDTCRANAIP
 DGPRGYRMITEGGVSIHQVQVTPESVLIQVQHILKNGLSLLKIGKRNFYIWKWLQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6667_d07.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_001040436

ORF Size: 1431 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_001040436.3](#)
RefSeq Size: 2173 bp

RefSeq ORF: 1434 bp

Locus ID: 51067

UniProt ID: [Q9Y2Z4](#)
Cytogenetics: 12p11.21

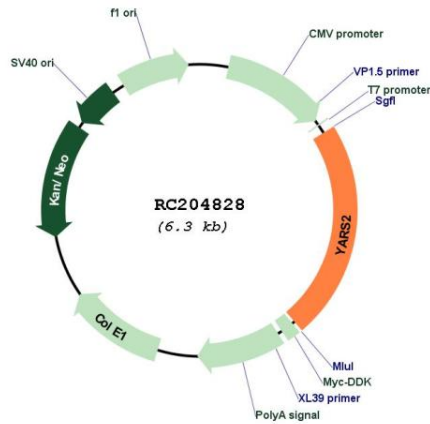
Protein Families: Druggable Genome

Protein Pathways: Aminoacyl-tRNA biosynthesis

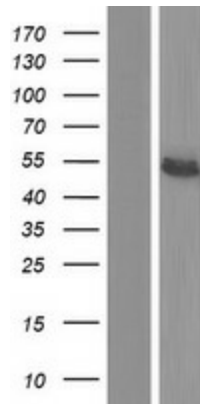
MW: 53.2 kDa

Gene Summary: This gene encodes a mitochondrial protein that catalyzes the attachment of tyrosine to tRNA(Tyr). Mutations in this gene are associated with myopathy with lactic acidosis and sideroblastic anemia type 2 (MLSA2). [provided by RefSeq, Jan 2011]

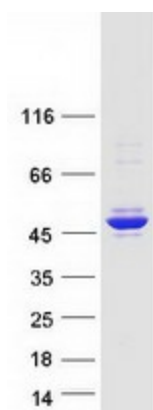
Product images:



Circular map for RC204828



Western blot validation of overexpression lysate (Cat# [LY421754]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204828 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified YARS2 protein (Cat# [TP304828]). The protein was produced from HEK293T cells transfected with YARS2 cDNA clone (Cat# RC204828) using MegaTran 2.0 (Cat# [TT210002]).