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Product datasheet for RC203201

NARS2 (NM_024678) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NARS2 (NM_024678) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NARS2
Synonyms:	asnRS; DFNB94; SLM5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC203201 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTGGGGGTCCGCTGCCTGCTGCGGTCCGTGCGCTTCTGTTCCTCCGCCCCCTTCCCCAAGCACAAAC
CTTCAGCCAAACTGAGCGTGCGGGACGCTCTCGGGGCTCAGAACGCGAGTGGGGAGCGCATTAAGATCCA
GGGATGGATTCGTTCTGTCCGATCCCAGAAGGAAGTCTTGTTCCTGCATGTAAATGATGGGTCATCTTTG
GAAAGCCTTCAGGTTGTTGCAGATTCAGGCCTTGACAGTAGAGAATTAACTTTTGGGAGTTCTGTGGAAG
TACAAGGGCAGCTGATAAAAAGTCCATCCAAAAGGCAAAATGTGGAACTGAAGGCAGAAAAAATTAAAGT
TATTGGAAATTGTGATGCCAAGGATTTCCCCATCAAATATAAAGAGAGGCATCCTCTGGAGTACCTGCGA
CAATATCCTCACTTTAGGTGTAGGACTAACGTTCTGGGTTCTATATTGAGGATTCGCAGTGAAGCGACAG
CTGCTATTCATTCTTTCTTTAAGGACAGTGGCTTTGTACATATTCATACTCCAATAATCACATCCAATGA
CTCTGAGGGAGCTGGAGAACTTTTTCAACTTGAACCTTCAGGCAAACTTAAGGTACCTGAGGAGAATTTC
TTCAATGTTCCTGCTTTCTTAACTGTCTCAGGACAACTTCATCTAGAAGTGATGTCAGGAGCTTTTACTC
AAGTGTTTACCTTTGGTCCGACCTTCCGAGCTGAAAATTCTCAGAGCCGGAGGCACCTGGCAGAGTTTTA
TATGATAGAAGCAGAGATTTCTTTTGTTGACAGCCTTCAAGATCTTATGCAGGTTATAGAGGAACTGTTC
AAGGCTACAACAATGATGGTTCTCTCAAAATGTCCTGAAGATGTTGAACTCTGTCACAAATTCATAGCAC
CTGGCCAAAAGGACAGATTAGAACATATGCTAAAAAACAACTTTTTAATCATTTCTTATACTGAAGCAGT
GGAGATCTTAAAGCAAGCATCCCAGAACTTCACCTTTACCCCAGAGTGGGGTGCTGACCTACGGACTGAA
CATGAAAAGTACCTGGTGAAGCACTGTGGCAACATACCTGTCTTCGTTATTAATTATCCATTAACACTCA
AGCCTTTCTACATGAGGGATAATGAAGATGGCCCTCAGCACACGGTTGCTGCTGTTGATCTTCTGGTTCC
TGGAGTTGGGGAACTCTTTGGAGGAGGCCTCAGAGAAGAACGATACCATTTCTTAGAGGAGCGCTTAGCC
AGATCGGGACTTACAGAAGTCTACCAATGGTATCTGGACCTTCGTCGATTTGGATCTGTGCCACATGGAG
GTTTTGGGATGGGATTTGAACGCTACCTGCAGTGCATCTTGGGTGTTGACAATATCAAAGATGTTATCCC
TTTCCCAAGGTTTCCTCATTCATGCCTTTTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203201 protein sequence
Red=Cloning site Green=Tags(s)

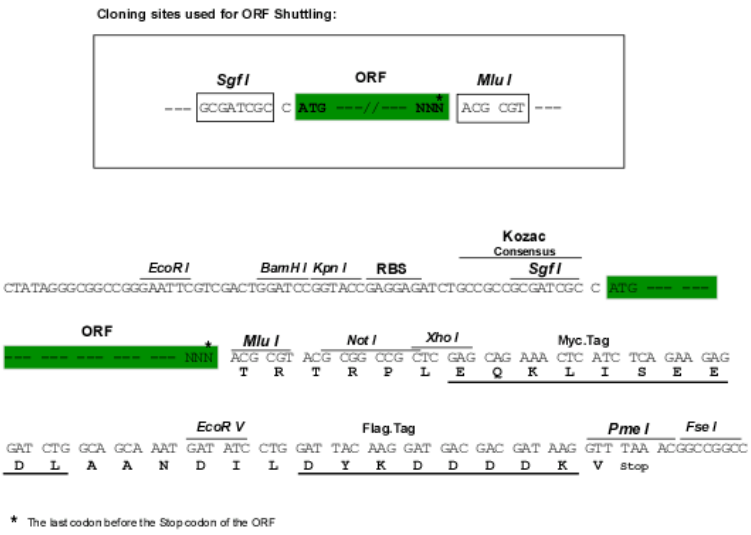
MLGVRCLLRSVRFCSSAPFPKHKPSAKLSVRDALGAQNASGERIKIQGWIRSVRSQKEVLFLHVNDGSSL
ESLQVVADSGLDSRELTFGSSVEVQGQLIKSPSKRQNVELKAEKIKVIGNCDAKDFPIKYKERHPLEYLR
QYPHFRCRTNVLGSILRIRSEATAAIHSFFKDSGFVHIHTPIITSNDSEGAGELFQLEPSGKLKVPEENF
FNVPAFLTVSGQLHLEVMSGAFTQVFTFGPTFRAENSQSRRHLAEFYMIEAEISFVDSLQDLMQVIEELF
KATTMMVLSKCPEDVELCHKFIAPGQKDRLEHMLKNNFLIISYTEAVEILKQASQNFTFTPEWGADLRTE
HEKYLVKHCGNIPVFVINYPLTLKPFYMRDNEDGPQHTVAAVDLLVPGVGELFGGGLREERYHFLEERLA
RSGLTEVYQWYLDLRRFGSVPHGGFGMGFERYLQCILGVDNIKDVIPFPRFPHSCLL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6412_b11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_024678

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_024678.3, NP_078954.3

RefSeq Size: 2519 bp

RefSeq ORF: 1434 bp

Locus ID: 79731

UniProt ID: Q96I59

Cytogenetics: 11q14.1

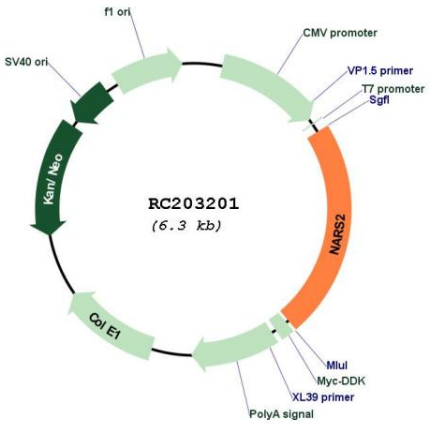
Domains: tRNA-synt_2, tRNA_anti

Protein Pathways: Aminoacyl-tRNA biosynthesis

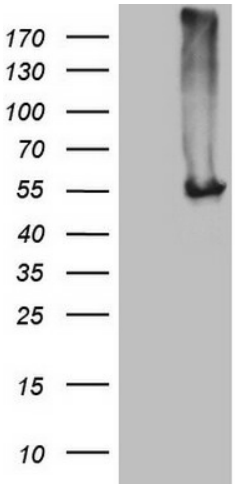
MW: 54.1 kDa

Gene Summary: This gene encodes a putative member of the class II family of aminoacyl-tRNA synthetases. These enzymes play a critical role in protein biosynthesis by charging tRNAs with their cognate amino acids. This protein is encoded by the nuclear genome but is likely to be imported to the mitochondrion where it is thought to catalyze the ligation of asparagine to tRNA molecules. Mutations in this gene have been associated with combined oxidative phosphorylation deficiency 24 (COXPD24). [provided by RefSeq, Mar 2015]

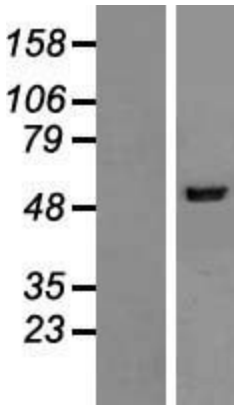
Product images:



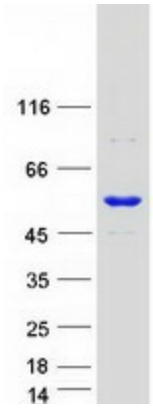
Circular map for RC203201



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NARS2 (Cat# RC203201, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NARS2 (Cat# [TA806502])(1:500). Positive lysates [LY411139] (100ug) and [LC411139] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY411139]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203201 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NARS2 protein (Cat# [TP303201]). The protein was produced from HEK293T cells transfected with NARS2 cDNA clone (Cat# RC203201) using MegaTran 2.0 (Cat# [TT210002]).