

Product datasheet for **RR204715**

Aars2 (NM_001106891) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aars2 (NM_001106891) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aars2
Synonyms:	Aarsl; AlaRS
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR204715 representing NM_001106891 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGCGCTCAGTGGCTGCTGCGGCCGGGAGGCTGCGGCAGCCATTGGGAGGTCGTGCCCATGGCAGC
GGTTCTCAACCGAGCCCCACCCACCCACGGAGCGCCGTCGCGGACGCCTTCTGAGCTTCTCCGAGA
TCGCCACGGCCACCGGCTCGTGCCCTCCGTTCCGTGAGGCCGCGCGGCACCCAGCCTGCTTTTCGTC
AACGCAGGCATGAACCAGTTCAAGCCCATCTTCTGGGCACGGTGGATCCACGAAGCGAGATGGCAGGCT
TCCGACGAGTAGCTAACAGCCAGAAATGTGTCAGGGCTGGAGGACGCCATAACGACCTGGAAGATGTGGG
CCGTGATCTCTCATCATACTTTTTTTGAGATGCTTGGCAACTGGGCTTTTGGGGTGAATATTTAAG
AAAGAAGCATGTAGCATGGCCTGGGAAGTGTGACTCAAGTCTATGGGATCCCTGAGGACAGGTTATGGG
TCTCCTATTTTCAGTGGTACTCCAAGACAGGGTTGGACCCAGACCTGGAGACCAGAGACATCTGGCTCAG
CTTGGGGTACCTGCCAGCCGTGTGCTCTCGTTCGGACTGCAAGAGAAGTCTGGGAGATGGGAGACACC
GGACCTTGTGGCCTTGTACCGAGATCCATTACGATCTGGTGGTGAATGGGACCCCCAGCTGGTTG
AGCTATGGAATCTGGTCTTCATGCAACACTACAGAGAGGCAGCGAAGCCTGCATCTGCTGCCACAGCA
ACATGTGGACACAGGAATGGCCCTGGAAAGACTGGTGGCTGACTGCAGGCAAGCATTCCACCTACGAC
ACCGACCTCTTTTCTCCACTGCTTGATGTATACACCAGAGCTGCAGGGTCCCCGTACTCTGGCCGCG
TAGGGGACGCGGATGAGGGACGAATAGACACAGCGTACCGAGTTGTAGCTGATCATACCCGACGCTCAG
TGTCTGCATTGCTGATGGCGTCTCCCCGGGATGTGAGGCGCCCCGCTAGTTCTTCGTCGGATTCTCCGT
CGAGCTGTGCGCTATTCCACAGAGGCTTGCAGGCACCACCTGGCTTTCTGGCAACCTGGTACCAGTGG
TGGTGGCGACATTGGGAGCTGCTTACCCAGAAGTTCAGAAAGTTCAGTCAAGGTATTGATCTGGGAGAT
AGCCAACCTGGTGTGAGGATGAGGCAGCCTTCTGGCCTCCCTGCAGAGAGCCGTCGGATCATTGAT
CGCACCGTTAAGCGCTTGGGCCCTTCTGATTTGTTCCCTGCCAAGTGGCCTGGTCACTGCACTGTCTG
GGAATCTGGGGATCCCCCTGGACCTGGTGCAGCTAATGTTGGAGGAGAAGGGGGTGAAGCTGGACTGCG
GGCCTGGAGCAGCTAGCCCAGAAGGAAGCCAGCACCGGCCAGCAGGCGAGGACAGCTCAGGAGGAG
GGATTGTGCTTGTGATGTCCACGCACTGGAGGAGCTGCACCGTCAAGGCATACCCACAAGTATGACAGCC



[View online >](#)

CCAAATATAACTACTCTCTTCGCCCAATGGGGATTATGAGTTTGGCCTCTGTGAGGCCAGGTATTACA
 GCTGTATTAGAGACTGGGACAGCTGTGGCCTCCGTGGGAGAAGGCCAGCGCTGTGGCCTCCTATTGGAC
 AGAACCAACTTCTATGCTGAACAAGGGGTCAGGCTTCGGACCGAGGCTACCTCATTTCGTACAGGGCAGC
 AGGATGTGTTGTTCCCTGTGGCCGGGCTCAGGCTGTGGAGGCTTCATCCTGCATGAGGCCATGGCTCC
 CGAGTGCTACAAGTCGGGGACCGAGTGCAGCTCTATGTGGATAAGGCCTGGCGAATGGGATGCATGGTG
 AAGCACACAGCCACCCACCTGCTGAACGGGCACTTCGGCAGACGCTCGGACCAACCACCGAACAGCGGG
 GCTCCCATCTCAACCCGGAGCGGCTGCGCTTTGATGTGGCCACGACAGCCCACTGACCACAGAGCAGCT
 ACGGACAGTAGAGAGCTACGTGCAGGAAGCTGTGGGGCAGGATAAGCCTGTATACATGGAGGAAGTGCCC
 CTGGCACACACTGCCCGTATCCCGGCCTTCGCTCACTGGATGAGGTGTACCCAGACCCCGTTCCGGTCCG
 TGTCAAGTGGGGTTCCTGTGGCCAGGCACTGGCACCAGCCTCCCAAGCTGCACTGCAGACTTCGGTGGG
 GCTGTGCTGCGGGACGCACCTGCTAAGTACTGGGGCTGTGGGAGACCTGGTGATTATTGGGGATCGCCAG
 CTGGTCAAAGGCATCACTCGCTACTGGCCATCACCGGGAGCAGGCCAACAGGCCCGAGAGGTGGGCC
 AGAGCCTGTCGCAGGAGGTGAAGTGGCAAGCGAACGGCTAAGTCGGGGCAGCCGGGACCTGCTGGAGGC
 TCACCGGCTATCTAAGGACATAGGACGCTCATTGAGTTCACAGAGTCTGCTGTGATACCTCAGTGGCAG
 CGGACAGGAGCAGACACTGAAGATGCTACAGCGCCGTGCCAACCCGCCATCCGAAACTGGAGA
 AGAGCCAGGCTACGGAGAAATCCAGGAGCTGTTGAAACGGCACTCGGAGGGGCCCTGATTGTGGACAC
 TGCTCCGCCAGTCCCTCTCGGTGCTGGTAAAGTCTGCGGCAGCTGTGCAAACAGGCCCCAGCATG
 TCCGTGCTGCTGCTCAGCCCCAGCCACTGGCAGTGTCTGTGTGCCTGCCAGGTGGCCAGGGTGCCA
 CACCTACCTTACAGCTGAGGCCTGGGCCCTAGCTGTGTGCAGCCACATGGGAGGCAAGGCTTGGGGCTC
 TCCAGTGATAGCCAGGGTACTGGACACACTGCTGACCTGGAGGCTGCCCTCAGGACAGCCCGAGCTTAT
 GCACTCAACCAGCTC

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR204715 representing NM_001106891
 Red=Cloning site Green=Tags(s)

MAASVAAAAGRLRRAIGRSCPWQRFSTEPHPHGA AVRDAFLSFFRDRHGRLVPSASVRPRGDP SLLFV
 NAGMNQFKPIFLGTVDPRSEMAGFRRVANSQKCVRAGGRHNDLEDVGRDLSHHTFFEMLGNWAFGG EYFK
 KEACSMAWELLTQVYGIPEDR LWYSYFSGDSKTLDPDLETRDIWLSLGV PASRVLSFGLQENFWEMGDT
 GPCGPCTEIH YDLAGGMPPQLVELWNLVFMQHYREADGSLHLLPQQHVDTGMGLERLVAVLQGHSTYD
 TDLFSPLLDAIHQSCRVP PYSGRVGADEGRIDTAYRVVADHIRTLSVCIADGVSPGMSGAPLVLRRILR
 RAVRYSTEVLQAPP GFLGNLVPVVVATLGAAYPELQKNSVKVLIWEIANLVSEDEAAFLASLQRGRRIID
 RTVKRLGPSDLFPAEVAWSLSLGNLGIPLDLVQLMLEEKGVKLDTAGLEQLAQKEAQHRAQQAEAAQEE
 GLCLDVHALEELHRQGIPTTDDSPKYNYSLRPNGDYEFGLCEAQLQLYSETGTAVASVGEQRCGLLLD
 RTNFYAEQGGQASDRGYLIRTGQDVLFPVARAQVCGGFI LHEAMAPECLQVGDVQLYVDKAWRMGCMV
 KHTATHLLNWALRQTLGPTTEQRGSHLNPERLRFDVATQTPLTTEQLRTVESYVQEA VQDKPVYME EEP
 LAHTARIPGLRSLDEVYPDVRVSVGVPAQALAPASQAALQTSVELCCGTHLLSTGAVGDLVIIGDRQ
 LVKGITRLLAITGEQAQQAREVQSLSQEVEVASERLSRGSRD LLEAHLR SKDIGRLIEFTESAVIPQWQ
 RQEQQTTLKMLQRRANTAIRKLEKSQATEKSQELLKRHSEGPLIVDTVSAQSLSVLVKVRQLCKQAPSM
 SVLLLSPQPTGSVLCACQVAQGATPTFTA EAWALAVCSHMGKAWGSPVIAQGTGHTADLEAALRTARAY
 ALNQL

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

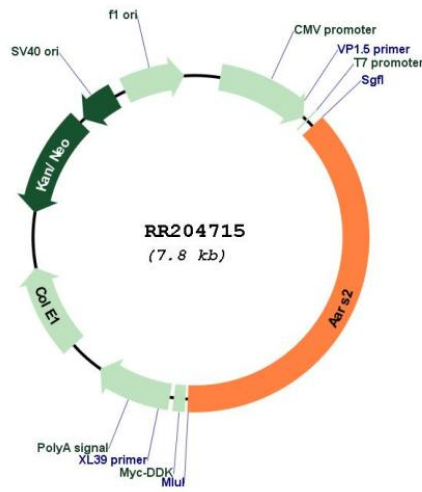
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001106891
 ORF Size: 2955 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:	<ol style="list-style-type: none">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_001106891.1 , NP_001100361.1
RefSeq Size:	3323 bp
RefSeq ORF:	2958 bp
Locus ID:	301254
UniProt ID:	D3ZX08
Cytogenetics:	9q12
MW:	107.8 kDa
Gene Summary:	Catalyzes the attachment of alanine to tRNA(Ala) in a two-step reaction: alanine is first activated by ATP to form Ala-AMP and then transferred to the acceptor end of tRNA(Ala). Also edits incorrectly charged tRNA(Ala) via its editing domain.[UniProtKB/Swiss-Prot Function]