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Product datasheet for RC202136

AlaRS (AARS) (NM_001605) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AlaRS (AARS) (NM_001605) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AlaRS
Synonyms:	AARS; CMT2N; DEE29; EIEE29
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC202136 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGACTCTACTCTAACAGCAAGTGAAATCCGGCAGCGATTTATAGATTTCTTCAAGAGGAACGAGCATA
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CTTCGCCCAGCTGCGCCTCGGGGATGTAAAGAAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC202136 protein sequence
Red=Cloning site Green=Tags(s)

MDSTLTASEIRQRFIDFFKRNEHTYVHSSATIPLDDPTLLFANAGMNQFKPIFLNTIDPSHPMAKLSRAA
NTQKCIRAGGKHNDLDDVGKDVYHHTFFEMLGSWSFGDYFKELACKMALELLTQEFGIPIERLYVTYFGG
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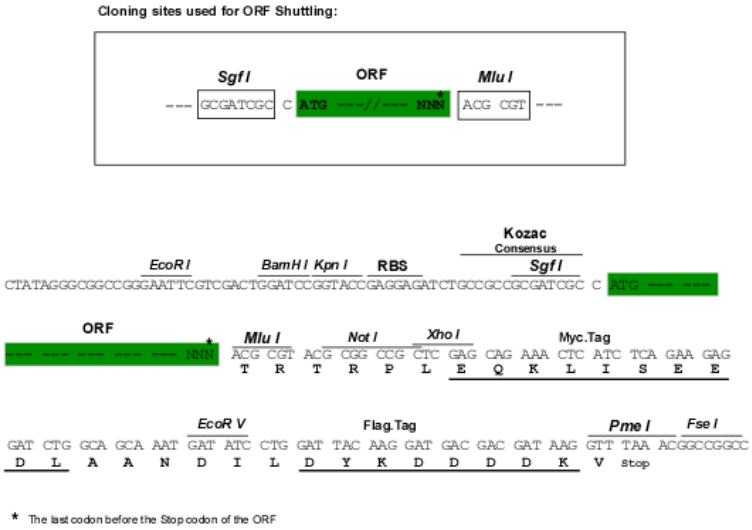
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6202_e02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



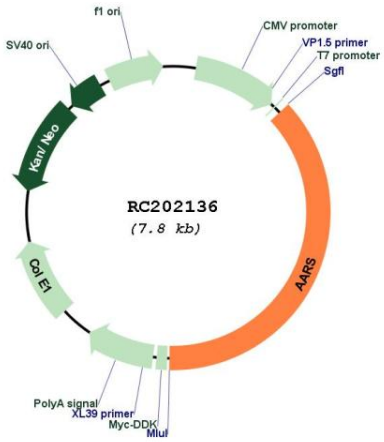
ACCN: NM_001605

ORF Size: 2904 bp

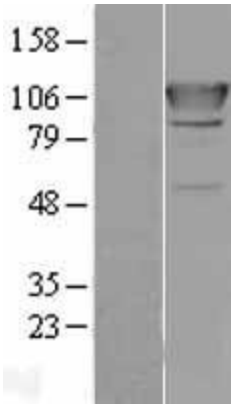
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001605.3
RefSeq Size:	3344 bp
RefSeq ORF:	2907 bp
Locus ID:	16
UniProt ID:	P49588
Cytogenetics:	16q22.1
Domains:	tRNA-synt_2c, DHHA1
Protein Pathways:	Aminoacyl-tRNA biosynthesis
MW:	106.8 kDa

Gene Summary: The human alanyl-tRNA synthetase (AARS) belongs to a family of tRNA synthases, of the class II enzymes. Class II tRNA synthases evolved early in evolution and are highly conserved. This is reflected by the fact that 498 of the 968-residue polypeptide human AARS shares 41% identity witht the E.coli protein. tRNA synthases are the enzymes that interpret the RNA code and attach specific aminoacids to the tRNAs that contain the cognate trinucleotide anticodons. They consist of a catalytic domain which interacts with the amino acid acceptor-T psi C helix of the tRNA, and a second domain which interacts with the rest of the tRNA structure. [provided by RefSeq, Jul 2008]

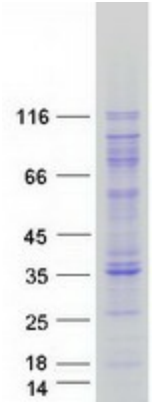
Product images:



Circular map for RC202136



Western blot validation of overexpression lysate (Cat# [LY400604]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202136 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified AARS protein (Cat# [TP302136]). The protein was produced from HEK293T cells transfected with AARS cDNA clone (Cat# RC202136) using MegaTran 2.0 (Cat# [TT210002]).