

Product datasheet for **RG201089**

valyl tRNA synthetase (VARS) (NM_006295) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	valyl tRNA synthetase (VARS) (NM_006295) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	VARS1
Synonyms:	G7A; NDMSCA; VARS; VARS2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201089 representing NM_006295 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCCACCTCTACGTCTCCCCTACCCAGATGCCTTCCCCAGCCTCCGAGCCCTCATAGCCGCTCGCT
ATGGGGAGGCTGGGGAGGGTCCCAGATGGGGAGGAGCCACCCCCGCATCTGTCTCCAGCCACCCCCGAC
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GGGGCCACGGCTGTGGCCAGCTGCTGTGGCCAGCAGGCCCTGGGGGGCCAGGGGGCAGCCGGCGGCTG
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GGCCCTGGGACTCCGAAGCTCGGCCAGGACCCCAAGGCTGTGCTGGGGGCCCTGGGCAGGGCCCTGAGC
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CATCTATCGCAGTACCCGCTTGTAACTGGTCTGCACCCTCACTCCGCCATCTGACATTGAGGTG



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GATAAGAAGGAGCTGACAGGTCGCACCCTGCTCTCCGTGCCTGGCTACAAGGAGAAGGTGGAGTTCGGGG
TCCTCGTGTCTTTGCCTATAAGGTCCAAGGCTCAGATAGCGACGAGGAGGTGGTGGTGGCAACACTCG
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GGCAGATGAAGCCAAGCTCCAACAGACAGAAGCAGAGCTCAGGAAGTGGATGAGGCCATCGCCCTATTC
CAGAAGATGCTG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG201089 representing NM_006295
 Red=Cloning site Green=Tags(s)

MSTLYVSPHPDAFPSLRALIAARYGEAGEGPGWGGAHPRICLQPPPTSRTSFPPPRLPALAEQGGGLWVV
 GATAVAQLLWPAGLGGPGGSRAAVLVQQWVSYADTELIPAACGATLPALGLRSSAQDPQAVLGALGRALS
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 SGARPLSHQPGPEAPALPKTAAQLKKEAKKREKLEKFKQKQKIQQQQPPGEEKPKPEKREKRDPGVITY
 DLPTPPGEEKDVS GMPDYSYSPRYVEAAWYPWWEQQGFFKPEYGRPNVSAANPRGVFMMCI PPPNV TGS L
 HLGHAL TNAIQDSL TRWHRMRGETTL WNP GCDHAGIATQVVVEKKL WREQLSRHLGREAFLQEYVWKW
 EEKGDR IYHQLKLGSSLDWD RACFTMDPKLSAAVTEAFVRLHEEGIIYRSTRLVNWSCTLNSAISDIEV
 DKKELTGR TLLSVPGYKEKVEFVGLVVSFA YKVQGS DSDEEVVATTRIETMLGDVAVAVHPKDTRYQHLK
 GKNVIHPFLSRSLPIVFDEFVDMDFGTGAVKITPAHDQNDYEVGQRHGLEAISIMDSRGALINVPFPFLG
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 FGVSPDKISLQQDEDVLDTWFS SGLFPLSILGWPNQSEDL SVFYPGTLL ETGHDILFFWVARMVMLGLKL
 TGRLPFREVYLAIVRDAHGRKMSKSLGNVIDPLDVIYGISLQGLHNQLNSNLDPSEVEKAKEGQKADF
 PAGIPECGTDALRFGLCAYMSQGRDINLDVNRILGYRHFCNKLWNATK FALRGLGKGFVPSPTSQPGGHE
 SLVDRWIRSRLEAVRLSNQGFQAYDFPAVTTAQYSFWLYELCDVYLECLKPV LNGVDQVA AECA RQ TLY
 TCLDVGLRLLSPFMPFVTEELFQRLPRRMPQAPPSLCVTPYPEPSECSWKDPEAEAALELALSITRAVRS
 LRADYNL TRIRPDCFLVVADEATGALASAVSGYVQALASAGVVAVLALGAPAPQGC AVALASDRCSIHLQ
 LQGLVDPARELGKLAQRV EAQRQAQRLRERRAASGYPVKVPLEVQE ADEAKLQQTEAELRKVDEAIALF
 QKML

TRTRPLE - GFP Tag - V

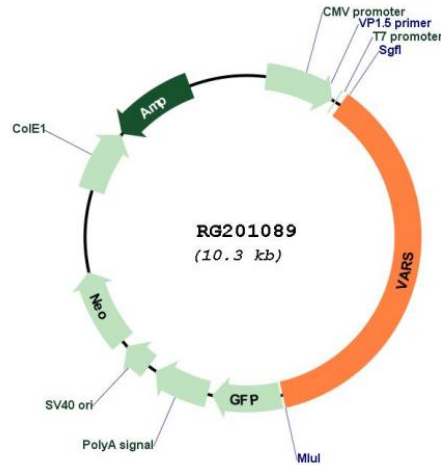
Restriction Sites:

Sgfi-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_006295

ORF Size: 3792 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_006295.2](#), [NP_006286.1](#)

RefSeq Size: 4308 bp

RefSeq ORF: 3795 bp

Locus ID: 7407

UniProt ID: [P26640](#)

Cytogenetics: 6p21.33

Protein Families:	Druggable Genome
Protein Pathways:	Aminoacyl-tRNA biosynthesis, Valine, leucine and isoleucine biosynthesis
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. The protein encoded by this gene belongs to class-I aminoacyl-tRNA synthetase family and is located in the class III region of the major histocompatibility complex. [provided by RefSeq, Jul 2008]