

## Product datasheet for **RG213161**

### ARSA (NM\_001085427) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ARSA (NM_001085427) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ARSA
Synonyms:	ASA; MLD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG213161 representing NM\_001085427  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGGGGCACCGGGTCCCTCCTCTGGCCCTGGCTGCTGGCCTGGCCGTGCCCGTCCGCCAACATCG  
 TGCTGATCTTTGCCGACGACCTCGGCTATGGGGACCTGGGCTGCTATGGGCACCCAGCTTACCACTCC  
 CAACCTGGACCAGCTGGCGGGCGGAGGGTTCGCGTTACAGACTTCTACGTGCCTGTGTCTCTGTGCACA  
 CCCTCTAGGGCCGCCCTCCTGACCGGCCGGCTCCCGTTTCGATGGGCATGTACCCTGGCGTCTGGTGC  
 CCAGCTCCCGGGGGGCCCTGCCCTGGAGGAGGTGACCGTGGCCGAAGTCTGGCTGCCGAGGCTACCT  
 CACAGGAATGGCCGGCAAGTGGCACCTTGGGGTGGGGCTGAGGGGGCTTCTGCCCCCCATCAGGGC  
 TTCATCGATTTCTAGGCATCCCGTACTCCACGACCAGGGCCCTGCCAGAACCTGACCTGCTTCCCGC  
 CGGCCACTCCTTGCAGCGTGGCTGTGACCAGGGCCTGGTCCCCATCCACTGTTGGCCAACTGTCCGT  
 GGAGGCGCAGCCCCCTGGCTGCCGGACTAGAGGCCCGCTACATGGCTTTCGCCATGACCTCATGGCC  
 GACGCCACAGCCAGGATCGCCCCCTTCTCCTGTACTATGCCTCTCACCACACCCACTACCTCAGTTCA  
 GTGGGCAGAGCTTTCAGAGCGTTCAGGCCGCGGGCCATTTGGGGACTCCCTGATGGAGCTGGATGCAGC  
 TGTGGGGACCCTGATGACAGCCATAGGGGACCTGGGGTCTTGAAGAGACGCTGGTTCATCTTCACTGCA  
 GACAATGGACCTGAGACCATGCGTATGTCCCGAGGCGGCTGCTCCGGTCTTTCGCGGTGTGGAAAGGGAA  
 CGACCTACGAGGGCGGTGTCGAGAGCCTGCCTTGGCCTTCTGGCCAGGTCAATCGCTCCCGCGGTGAC  
 CCACGAGCTGGCCAGCTCCCTGGACCTGCTGCCTACCTGGCAGCCCTGGCTGGGGCCCCACTGCCAAT  
 GTCACCTTGGATGGCTTTCACCTCAGCCCCCTGCTGCTGGGCACAGGCAAGAGCCCTCGGCAGTCTCTCT  
 TCTTACCCGTCCTACCCAGACGAGTCCGTTGGGGTTTTTGTGTGCGGACTGGAAAGTACAAGGCTCA  
 CTTCTTACCCAGGGCTCTGCCACAGTGATACCACTGCAGACCCTGCCTGCCACGCTCCAGCTCTCTG  
 ACTGCTCATGAGCCCCGCTGCTCTATGACCTGTCCAAGGACCCTGGTGAGAACTACAACCTGCTGGGGG  
 GTGTGGCCGGGGCCACCCAGAGGTGCTGCAAGCCTGAAACAGCTTCAGCTGCTCAAGGCCAGTTAGA  
 CGCAGCTGTGACCTTCGGCCCCAGCCAGGTGGCCCGGGGCGAGGACCCCGCCCTGCAGATCTGCTGCAT  
 CCTGGCTGCACCCCCGCCAGCTTGTGCCATTGCCAGATCCCCATGCC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG213161 representing NM\_001085427  
 Red=Cloning site Green=Tags(s)

MGAPRLLLLALAAGLAVARPPNIVLIFADDLYGDLGCGYHPSSTTPNLDQLAAGGLRFTDFYVPSLCT  
 PSRAALLTGRLPVRMGMPVGLVPSSRGGPLEEVTVAEVLAAARGYLTMAGKWHLGVGPEGAFLPPHQG  
 FHRFLGIPYSHDQGPCQNLTCFPPATPCDGGCDQGLVPIPLLANLSVEAQPPWLPGLARYMAFAHDLMA  
 DAQRQDRPFFLYYASHHHTYPQFSGQSF AERSGRGPF GDSLMELDAAVGTLMTAIGDLGLLEETLVIFTA  
 DNGPETMRMRSGGCSGLLRCKGTTYEGGVREPALAFWPGHIA PGVTHELASSLDLLPTLAALAGAPLPN  
 VTLDGFDLSPLLLGTGKSPRQSLFFYPSYPDEVRGVFAVRTGKYKAHFFTQGSASHSDTTADPACHASSSL  
 TAHEPPLLYDLKDPGENYNLLGGVAGATPEVLQALKQLQLLKAQLDAAVTFGPSQVARGEDPALQICCH  
 PGCTPRPACCHCPDPA

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



*EcoRI*
*BamHI* *KpnI*
RBS
Kozac  
Consensus
*SgfI*
*AscI*

CTATAGGGCGGCGGGAATTCGTCGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGCGCCAGATCT

*HindIII*
*NheI* *RsrII*
*MluI*
*NotI*
*XhoI*
GFP Tag

CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- --- --- --- ---

T
R
T
R
P
L
E
M
E
S
D
-
-
-

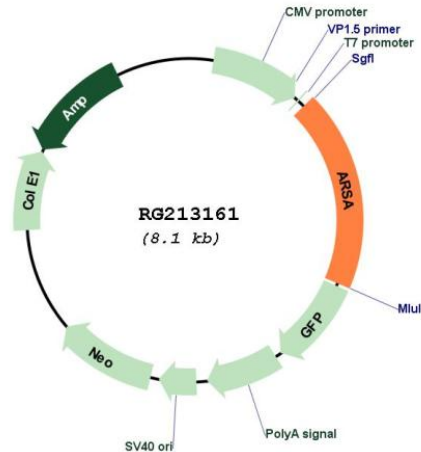
  

*PmeI*
*FseI*

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

-
-
E
E
R
V
Stop

## Plasmid Map:



ACCN: NM\_001085427

ORF Size: 1521 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\\_001085427.1](#), [NP\\_001078896.1](#)

**RefSeq Size:** 1873 bp

**RefSeq ORF:** 1530 bp

**Locus ID:** 410

**UniProt ID:** [P15289](#)

**Cytogenetics:** 22q13.33

**Protein Families:** Druggable Genome

**Protein Pathways:** Lysosome, Sphingolipid metabolism

**Gene Summary:** The protein encoded by this gene hydrolyzes cerebroside sulfate to cerebroside and sulfate. Defects in this gene lead to metachromatic leucodystrophy (MLD), a progressive demyelination disease which results in a variety of neurological symptoms and ultimately death. Alternatively spliced transcript variants have been described for this gene. [provided by RefSeq, Dec 2010]