

## Product datasheet for **RG217527**

### Argininosuccinate Lyase (ASL) (NM\_000048) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Argininosuccinate Lyase (ASL) (NM_000048) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ASL
Synonyms:	ASAL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG217527 representing NM\_000048  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGGCCTCGGAGAGTGGGAAGCTTTGGGGTGGCCGGTTTGTGGGTGCAGTGGACCCCATCATGGAGAAGT  
 TC AACCGTCCATTGCCTACGACCGCACCTTTGGGAGGTGGATGTTCAAGGCAGCAAAGCTACAGCAG  
 GGGCCTGGAGAAGGCAGGGCTCCTACCAAGGCCGAGATGGACCAGATACTCCATGGCCTAGACAAGGTG  
 GCTGAGGAGTGGGCCAGGGCACCTTCAAAGTGAAGTCCAATGATGAGGACATCCACACAGCCAATGAGC  
 GCCGCTGAAGGAGCTCATTGGTGAACGGCAGGGAAGCTGCACACGGGACGGAGCCGGAATGACCAGGT  
 GGTACAGACCTCAGGCTGTGGATGCGGCAGACCTGCTCCACGCTCTCGGGCCTCCTCTGGGAGCTCATT  
 AGGACCATGGTGGATCGGGCAGAGGCGGAACGTGATGTTCTTCCCGGGGTACACCCATTTGCAGAGGG  
 CCCAGCCCATCCGCTGGAGCCACTGGATTCTGAGCCACGCCGTGGCACTGACCCGAGACTCTGAGCGGCT  
 GCTGGAGGTGCGGAAGCGGATCAATGTCTGCCCCTGGGGAGTGGGGCCATTGCAGGCAATCCCCTGGGT  
 GTGGACCGAGAGCTGCTCCGAGCAGAAGTCAACTTTGGGGCCATCACTCTCAACAGCATGGATGCCACTA  
 GTGAGCGGGACTTTGTGGCCGAGTTCCTGTTCTGGGCTTCGCTGTGCATGACCCATCTCAGCAGGATGGC  
 CGAGGACCTATCCTCTACTGCACCAAGGAATTCAGCTTCGTGCAGCTCTCAGATGCCTACAGCAGGGGA  
 AGCAGCCTGATGCCCCAGAAGAAAAACCCGACAGTTTGGAGCTGATCCGGAGCAAGGCTGGGCGTGTGT  
 TTGGGCGGTGTGCCGGCTCCTGATGACCTCAAGGGACTTCCCAGCACATAACAAAGACTTACAGGA  
 GGACAAGGAAGCTGTGTTGAAGTGTGACACATATGAGTGCCGTGCTCCAGGTGGCCACTGGCGTCATC  
 TCTACGCTGCAGATTACCAAGAGAACATGGGACAGGCTCTCAGCCCCGACATGCTGGCCACTGACCTTG  
 CCTATTACCTGGTCCGAAAGGGATGCCATTCCGCCAGGCCACGAGGCCCTCCGGGAAAGCTGTGTTTCAT  
 GGCCGAGACCAAGGGGGTCCGCCCAACCAGCTGTCACTGCAGGAGCTGCAGACCATCAGCCCCCTGTTT  
 TCGGGCAGCTGATCTGCGTGTGGGACTACGGGCACAGTGTGGAGCAGTATGGTGCCTGGGCGGCACTG  
 CGCGCTCCAGCTCGACTGGCAGATCCGCCAGGTGCGGGCGCTACTGCAGGCACAGCAGGCC

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG217527 representing NM\_000048  
 Red=Cloning site Green=Tags(s)

MASESGKLWGRFVGAVDPIMEKFNASIAADRHLWEVDVQGSKAYSRLGKAGLLTKAEMDQILHGLDKV  
 AEEWAQGTFLKNSNDEDIHTANERRLKEIGATAGKLHTGRSRNDQVVDLRLWMRQTCSTLSGLLWELI  
 RTMVDRAEAERDVLFPGYTHLQRAQPIRWSHWILSHAVALTRDSERLLEVRKRINVLPLGSGAIAGNPLG  
 VDRELLRAELNFGAITLNSMDATSERDFVAEFLFWASLCMTHLSRMAEDLILYCTKEFSFVQLSDAYSTG  
 SSLMPQKKNPDSLELIRSKAGR VFGRCAGLLMTLKGLPSTYNKDLQEDKEAVFEVSDTMSAVLQVATGVI  
 STLQIHQENMGQALSPDMLATDLAYYLRKGMPPFRQAHEASGKAVFMAETKGVALNQLSLQELQITISPLF  
 SGDVICVWDYGHVSVEQYALGGTARSSVDWQIRQVRALLQAQQA

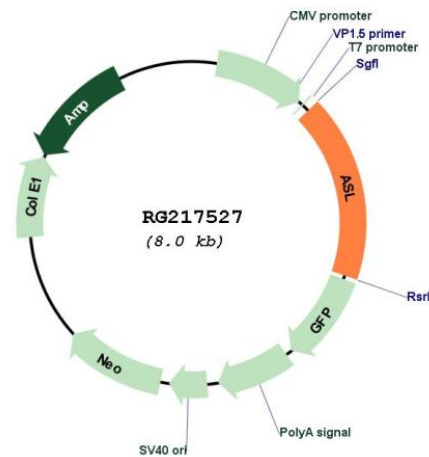
SGPTRRRLE - GFP Tag - V

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:


**Plasmid Map:**

**ACCN:** NM\_000048

**ORF Size:** 1392 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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_000048.4</a>
<b>RefSeq Size:</b>	1937 bp
<b>RefSeq ORF:</b>	1395 bp
<b>Locus ID:</b>	435
<b>UniProt ID:</b>	<a href="#">P04424</a>
<b>Cytogenetics:</b>	7q11.21
<b>Domains:</b>	lyase_1
<b>Protein Pathways:</b>	Alanine, aspartate and glutamate metabolism, Arginine and proline metabolism, Metabolic pathways
<b>Gene Summary:</b>	This gene encodes a member of the lyase 1 family. The encoded protein forms a cytosolic homotetramer and primarily catalyzes the reversible hydrolytic cleavage of argininosuccinate into arginine and fumarate, an essential step in the liver in detoxifying ammonia via the urea cycle. Mutations in this gene result in the autosomal recessive disorder argininosuccinic aciduria, or argininosuccinic acid lyase deficiency. A nontranscribed pseudogene is also located on the long arm of chromosome 22. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Jul 2008]