

Product datasheet for **RC201568**

Argininosuccinate Lyase (ASL) (NM_001024943) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Argininosuccinate Lyase (ASL) (NM_001024943) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Argininosuccinate Lyase
Synonyms:	ASAL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC201568 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCTCGGAGAGTGGGAAGCTTTGGGGTGGCCGGTTTGTGGGTGCAGTGGACCCCATCATGGAGAAGT
 TCAACGCGTCCATTGCCTACGACCGGCACCTTTGGGAGGTGGATGTTCAAGGCAGCAAAGCTACAGCAG
 GGGCCTGGAGAAGGCAGGGCTCCTCACCAAGGCCGAGATGGACCAGATACTCCATGGCCTAGACAAGGTG
 GCTGAGGAGTGGGCCAGGGCACCTTCAAAGTGAAGTCCAATGATGAGGACATCCACACAGCCAATGAGC
 GCCGCTGAAGGAGCTCATTGGTGAACGGCAGGGAAGCTGCACACGGGACGGAGCCGGAATGACCAGGT
 GGTACAGACCTCAGGCTGTGGATGCGGCAGACCTGCTCCACGCTCTCGGGCCTCCTCTGGGAGCTCATT
 AGGACCATGGTGGATCGGGCAGAGGCGGAACGTGATGTTCTTCCCGGGGTACACCCATTTGCAGAGGG
 CCCAGCCCATCCGCTGGAGCCACTGGATTCTGAGCCACGCCGTGGCACTGACCCGAGACTCTGAGCGGT
 GCTGGAGGTGCGGAAGCGGATCAATGTCTGCCCCTGGGGAGTGGGGCCATTGCAGGCAATCCCCTGGGT
 GTGGACCGAGAGCTGCTCCGAGCAGAACTCAACTTTGGGGCCATCACTCTCAACAGCATGGATGCCACTA
 GTGAGCGGGACTTTGTGGCCGAGTTCCTGTTCTGGGCTTCGCTGTGCATGACCCATCTCAGCAGGATGGC
 CGAGGACCTATCCTCTACTGCACCAAGGAATTCAGCTTCGTGCAGCTCTCAGATGCCTACAGCAGGGGA
 AGCAGCCTGATGCCCCAGAAGAAAAACCCGACAGTTTGGAGCTGATCCGGAGCAAGGCTGGGCGTGTGT
 TTGGGCGGTGTGCCGGCTCCTGATGACCTCAAGGGACTTCCAGCACCTACAACAAAGACTTACAGGA
 GGACAAGGAAGCTGTGTTGAAGTGTGAGACACTATGAGTGCCGTGCTCCAGGTGGCCACTGGCGTCATC
 TCTACGCTGCAGATTACCAAGAGAACATGGGACAGGCTCTCAGCCCCGACATGCTGGCCACTGACCTTG
 CCTATTACCTGGTCCGAAAGGGATGCCATTCGCCAGGCCACAGAGCCCTCCGGGAAAGCTGTGTTTCAT
 GGCCGAGACCAAGGGGGTCCGCCCTCAACCAGCTGTCAGTGCAGGAGCTGCAGACCATCAGCCCCCTGTTT
 TCGGGCAGCTGATCTGCGTGTGGGACTACGGGCACAGTGTGGAGCAGTATGGTGCCTGGGCGGCACTG
 CGCGCTCCAGCGTCACTGGCAGATCCGCCAGGTGCGGGCGCTACTGCAGGCACAGCAGGCC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTAA

Protein Sequence:

>RC201568 protein sequence
 Red=Cloning site Green=Tags(s)

MASESGKLWGRFVAVDPIMEKFNASIAADRHLWEVDVQGSKAYSRLGKAGLLTKAEMDQILHGLDKV
 AEEWAQGTFFKLSNDEDIHTANERRKELIGATAGKLHTGRSRNDQVVDLRLWMRQTCSTLSGLLWELI
 RTMVDRAEAERDVLFPGYTHLQRAQPIRWSHWILSHAVALTRDSERLLEVRKRINVLPLGSGAIAGNPLG
 VDRELLRAELNFGAITLNSMDATSERDFVAEFLFWASLCMTHLSRMAEDLILYCTKEFSFVQLSDAYSTG
 SSLMPQKKNPDSLELIRSKAGRFGRCAGLLMTLKGLPSTYNKDLQEDKEAVFEVSDTMSAVLQVATGVI
 STLQIHQENMQALSPDMLATDLAYYLVRKGMPPFRQAHEASGKAVFMAETKGVALLNQLSLQELQTIISPLF
 SGDVICVWDYGHVSVEQYALGGTARSSVDWQIRQVRALLQAQQA

SGPTRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6618_g12.zip

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: NM_001024943

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.

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_001024943.2](#)

RefSeq Size: 2061 bp

RefSeq ORF: 1395 bp

Locus ID: 435

UniProt ID: [P04424](#)

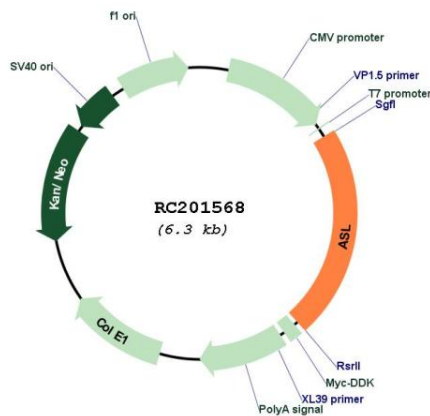
Cytogenetics: 7q11.21

Protein Pathways: Alanine, aspartate and glutamate metabolism, Arginine and proline metabolism, Metabolic pathways

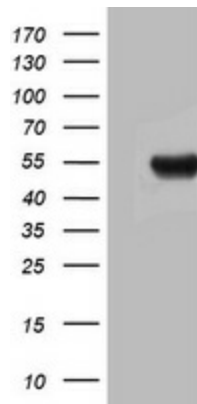
MW: 51.7 kDa

Gene Summary: 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]

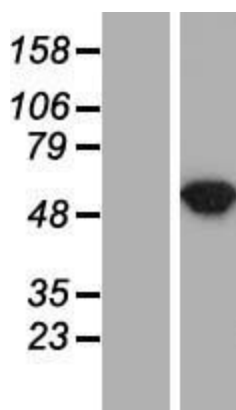
Product images:



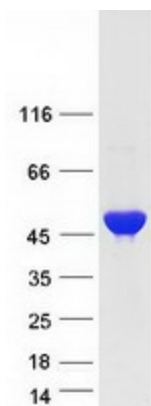
Circular map for RC201568



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ASL (Cat# RC201568, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ASL (Cat# [TA802245]). Positive lysates [LY422562] (100ug) and [LC422562] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424953]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC217527] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ASL protein (Cat# [TP301568]). The protein was produced from HEK293T cells transfected with ASL cDNA clone (Cat# RC201568) using MegaTran 2.0 (Cat# [TT210002]).