

Product datasheet for **RC225694**

Adenylosuccinate Lyase (ADSL) (NM_001123378) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Adenylosuccinate Lyase (ADSL) (NM_001123378) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Adenylosuccinate Lyase
Synonyms:	AMPS; ASASE; ASL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC225694 representing NM_001123378
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGGTGGAGGCGATCATGGTTCGCCCGACAGCTACCGCTCACCTCTTGCCCTCCCGCTATGCCAGCC
 CGGAGATGTGCTTCGTGTTTAGCGACAGGTATAAATCCGGACATGGCGGACAGCTGTGGCTGGCTGGC
 GGAGGCCGAGCAGACATTGGGTTTGCTATCACAGATGAACAAATCCAGGAGATGAAATCAAACCTGGAG
 AACATCGACTTCAAGATGGCAGCTGAGGAAGAGAAACGTTTACGACATGATGTGATGGCTCACGTGCACA
 CATTGGCCACTGCTGTCCAAAAGCTGCAGGCATTATTACCTTGGTGTACTTCTTGCTATGTTGGAGA
 CAATACTGACTTGATTATTCTTAGAAATGCACTTGACCTGCTTTTGCCAAAAGCTTGCCAGAGTGATCTCT
 CGGCTTGGCGACTTTGCTAAGGAACGAGCCAGTCTACCCACATTAGGTTTACACATTTCCAGCCTGCAC
 AGCTGACCACAGTTGGGAAACGTTGCTGTCTTTGGATTACAGATCTTTGCATGGATCTCCAGAACTTGAA
 GCGTGTCCGAGATGACCTGCGCTTCCGGGGAGTAAAGGGTACCACTGGCACTCAGGCCAGTTTCTCGAC
 CTCTTTGAGGGAGATGACCATAAGGTAGAGCAGCTTGACAAGATGGTGACAGAAAAGGCAGGATTTAAGA
 GAGCTTTCATCATCACAGGGCAGACATATACAGAAAAGTGGATATTGAAGTACTGTCTGTGCTGGCTAG
 CTTGGGGGCATCAGTGCACAAGATTTGCACCGACATACGCCTCCTGGCAAACCTCAAGGAGATGGAGGAA
 CCCTTTGAAAAACAGCAGATTGGCTCAAGTGGCATGCCATATAAGCGGAAATCCATGCGTTCAGAACGTT
 GCTGCAGTCTTGGCCGCCACCTGATGACCCTTGTATGGACCCGCTACAGACAGCATCTGTCCAGTGGTT
 TGAACGCACACTGGATGATAGTGCCAACCGACGGATCTGTTTGGCCGAGGCATTTCTTACCGCAGATACT
 ATATTGAATACGCTGCAGAACATTTCTGAAGGATTGGTCGTGTACCCCAAAGTAATTGAACGGCGCATT
 GGCAAGAGCTGCCTTTCATGGCCACAGAGAATCATCATGGCCATGGTCAAAGCTGGAGGTAGCCGCCA
 GGTGCAGAGATTCTTAGAAGAGGAGGTATCCCCTGTTAAAACCATATGAAAGCGTGATGAAGGTGAAA
 GCAGAATTATGTCTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC225694 representing NM_001123378
 Red=Cloning site Green=Tags(s)

MAAGGDHGSPDSYRSPLASRYASPEMCFVFSDRYKFRWTWRQLWLWLAEEQTLGLPITDEQIQEMKSNLE
 NIDFKMAAEEKRLRHDVMAHVHTFGHCCPKAAGIIHLGATSCYVDNTDLIILRNALDLLLLPKLARVIS
 RLADFAKERASLPTLGFTHFQPAQLTTVGKRCLWIQDLCMDLQNLKVRDRLFRGVKGTGTQASFLQ
 LFEGDDHKVEQLDKMVEKAGFKRAFIITGQTYTRKVDIEVLSVLASLGASVHKICTDIRLLANLKEMEE
 PFEKQQIGSSAMPYKRNPMRSECCSLARHMLTLVMDPLQTASVQWFERTLDDSANRRICLAEAFLTADT
 ILNLTQNISEGLVVPYKVIERRIRQELPFMATENIIMAMVKAGGSRVQRFLEEEVYPLLKPYESVMKVK
 AELCL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

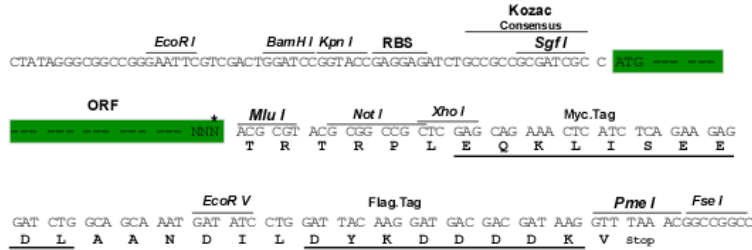
https://cdn.origene.com/chromatograms/mk8059_a04.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_001123378

ORF Size: 1275 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_001123378.2](#), [NP_001116850.1](#)
RefSeq ORF: 1278 bp

Locus ID: 158

UniProt ID: [P30566](#)
Cytogenetics: 22q13.1

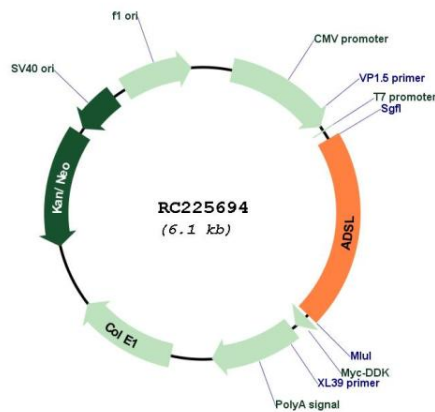
Protein Families: Druggable Genome

Protein Pathways: Alanine, aspartate and glutamate metabolism, Metabolic pathways, Purine metabolism

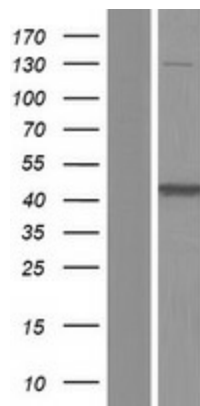
MW: 48.1 kDa

Gene Summary: The protein encoded by this gene belongs to the lyase 1 family. It is an essential enzyme involved in purine metabolism, and catalyzes two non-sequential reactions in the de novo purine biosynthetic pathway: the conversion of succinylaminoimidazole carboxamide ribotide (SAICAR) to aminoimidazole carboxamide ribotide (AICAR) and the conversion of adenylosuccinate (S-AMP) to adenosine monophosphate (AMP). Mutations in this gene are associated with adenylosuccinase deficiency (ADSLD), a disorder marked with psychomotor retardation, epilepsy or autistic features. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Dec 2015]

Product images:



Circular map for RC225694



Western blot validation of overexpression lysate (Cat# [LY426615]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC225694 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).