

## Product datasheet for **RG225694**

### 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:	TurboGFP
Symbol:	Adenylosuccinate Lyase
Synonyms:	AMPS; ASASE; ASL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG225694 representing NM_001123378 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGCTGGAGGCGATCATGGTTCGCCGACAGCTACCGCTCACCTCTTGCCTCCCGCTATGCCAGCC  
CGGAGATGTGCTTCGTGTTAGCGACAGGTATAAATCCGGACATGGCGGCAGCTGTGGCTGTGGCTGGC  
GGAGGCCGAGCAGACATTGGGTTTGCCTATCACAGATGAACAAATCCAGGAGATGAAATCAAACCTGGAG  
AACATCGACTTCAAGATGCGAGCTGAGGAAGAGAAACGTTTACGACATGATGTGATGGCTCACGTGCACA  
CATTTGGCCACTGCTGTCCAAAAGCTGCAGGCATTATTACCTTGGTGCTACTTCTTGCTATGTTGGAGA  
CAATACTGACTTGATTATTCTTAGAAATGCACTTGACCTGCTTTTGCCAAAGCTTGCCAGAGTGATCTCT  
CGGCTTGCCGACTTTGCTAAGGAACGAGCCAGTCTACCCACATTAGGTTTACACATTTCCAGCCTGCAC  
AGCTGACCACAGTTGGGAAACGTTGCTGTCTTTGGATTACAGATCTTTGCATGGATCTCCAGAACTTGAA  
GCGTGTCCGAGATGACCTGCGCTTCCGGGGAGTAAAGGTACCACTGGCACTCAGGCCAGTTTCTCGCAG  
CTCTTTGAGGGAGATGACCATAAGGTAGAGCAGCTTGACAAGATGGTGACAGAAAAGGCAGGATTTAAGA  
GAGCTTTCATCATCACAGGGCAGACATATACACGAAAAGTGGATATTGAAGTACTGTCTGTGCTGGCTAG  
CTTGGGGGCATCAGTGCACAAGATTTGCACCGACATACGCCTCCTGGCAAACCTCAAGGAGATGGAGGAA  
CCCTTTGAAAAACAGCAGATTGGCTCAAGTGGATGCCATATAAGCGGAATCCCATGCGTTCAGAACGTT  
GCTGCAGTCTTGCCCGCACCTGATGACCTTGTTCATGGACCCGCTACAGACAGCATCTGTCCAGTGGTT  
TGAACGCACACTGGATGATAGTGCCAACCGACGGATCTGTTTGGCCGAGGCATTTCTTACCGCAGATACT  
ATATTGAATACGCTGCAGAACATTTCTGAAGGATTGGTCGTGTACCCCAAAGTAATTGAACGGCGCATT  
GGCAAGAGCTGCCTTTCATGGCCACAGAGAACATCATCATGGCCATGGTCAAAGCTGGAGGTAGCCGCCA  
GGTGCAGAGATTCTAGAAGAGGAGGTGTATCCCTGTTAAAACCATATGAAAGCGTGATGAAGGTGAAA  
GCAGAATTATGTCTG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG225694 representing NM\_001123378  
 Red=Cloning site Green=Tags(s)

MAAGGDHGGSPDSYRSPLASRYASPEMCFVFSDRYKFRWTRQLWLWLAEEQTLGLPITDEQIQEMKSNLE  
 NIDFKMAAEEEEKRLRHDVMAHVHTFGHCCPKAAGIIHLGATSCYVGDNTDLIILRNALDLLPKLARVIS  
 RLADFAKERASLPTLGFTHFQPAQLTTVGKRCCLWIQDLCMDLQNLKRVRRDLRFRGVKGTGTGTQASFLQ  
 LFEGDDHKVEQLDKMVKTEKAGFKRAFIITGQTYTRKVDIEVLSVLASLGASVHKICTDIRLLANLKEMEE  
 PFEKQQIGSSAMPYKRNPMSERCCSLARHMLTVMDPLQTASVQWFERTLDDSANRRICLAEAFLTADT  
 ILNLTQNISEGLVYYPKVIERRIRQELPFMATENIIMAMVKAGGSRQVQRFLEEEVYPLLKPYESVMKVK  
 AELCL

TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**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 Size:** 1388 bp

**RefSeq ORF:** 1278 bp

**Locus ID:** 158

**UniProt ID:** [P30566](#)

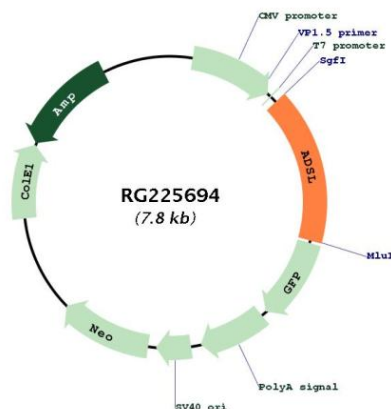
**Cytogenetics:** 22q13.1

**Protein Families:** Druggable Genome

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

**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 RG225694