

Product datasheet for RC231193

OriGene Technologies, Inc.

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Aminoacylase 1 (ACY1) (NM_001198898) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids

Product Name: Aminoacylase 1 (ACY1) (NM_001198898) Human Tagged ORF Clone

Tag: Myc-DDK

Symbol: Aminoacylase 1

Synonyms: ACY-1; ACY1D; HEL-S-5

Mammalian Cell

Selection:

Neomycin

Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)

ORF Nucleotide >RC231193 representing NM_001198898
Sequence: Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGACCAGCAAGGGTCCCGAGGAGGAGCACCCATCGGTGACGCTCTTCCGCCAGTACCTGCGTATCCGCA CTGTCCAGCCCAAGCCTGACTATGGCACCAACCCTACACTCTCCTCCATCTTGCTCAACTCCCACACGGA TGTGGTGCCTGTCTTCAAGGAACATTGGAGTCACGACCCCTTTGAGGCCTTCAAGGATTCTGAGGGCTAC ATCTATGCCAGGGGTGCCCAGGACATGAAGTGCGTCAGCATCCAGTACCTGGAAGCTGTGAGGAGGCTGA AGGTGGAGGCCACCGGTTCCCCAGAACCATCCACATGACCTTTGTGCCTGATGAGGAGGTTGGGGGTCA CCAAGGCATGGAGCTGTTCGTGCAGCGGCCTGAGTTCCACGCCCTGAGGGCAGGCTTTGCCCTGGATGAG CCAGCACTGGGAGGCCAGGCCATGCCTCACGCTTCATGGAGGACACAGCAGCAGAGAAGCTGCACAAGGT TGTAAACTCCATCCTGGCATTCCGGGAGAAGGAATGGCAGAGGCTGCAGTCAAACCCCCACCTGAAAGAG GGGTCCGTGACCTCCGTGAACCTGACTAAGCTAGAGGGTGGCGTGGCCTATAACGTGATACCTGCCACCA TGAGCGCCAGCTTTGACTTCCGTGTGGCACCGGATGTGGACTTCAAGGCTTTTGAGGAGCAGCTGCAGAG CTGGTGCCAGGCAGCTGGCGAGGGGGTCACCCTAGAGTTTGCTCAGAAGTGGATGCACCCCCAAGTGACA CCTACTGATGACTCAAACCCTTGGTGGGCAGCTTTTAGCCGGGTCTGCAAGGATATGAACCTCACTCTGG AGCCTGAGATCATGCCTGCTGCCACTGACAACCGCTATATCCGCGCGGTGGGGGTCCCAGCTCTAGGCTT CTCACCCATGAACCGCACACCTGTGCTGCTGCACGACCACGATGAACGGCTGCATGAGGCTGTGTTCCTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATTACAAGGATGACGACGATAAGGTTTAA





Protein Sequence: >RC231193 representing NM_001198898

Red=Cloning site Green=Tags(s)

MTSKGPEEEHPSVTLFRQYLRIRTVQPKPDYGTNPTLSSILLNSHTDVVPVFKEHWSHDPFEAFKDSEGY IYARGAQDMKCVSIQYLEAVRRLKVEGHRFPRTIHMTFVPDEEVGGHQGMELFVQRPEFHALRAGFALDE GIANPTDAFTVFYSERSPWWVRVTSTGRPGHASRFMEDTAAEKLHKVVNSILAFREKEWQRLQSNPHLKE GSVTSVNLTKLEGGVAYNVIPATMSASFDFRVAPDVDFKAFEEQLQSWCQAAGEGVTLEFAQKWMHPQVT PTDDSNPWWAAFSRVCKDMNLTLEPEIMPAATDNRYIRAVGVPALGFSPMNRTPVLLHDHDERLHEAVFL RGVDIYTRLLPALASVPALPSDS

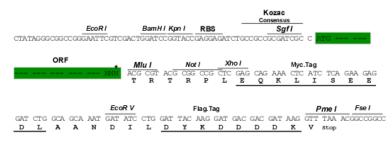
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8055 d10.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:





^{*} The last codon before the Stop codon of the ORF

ACCN: NM 001198898

ORF Size: 1119 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

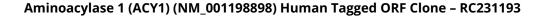
variants is recommended prior to use. More info

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: <u>NM 001198898.2</u>

RefSeq ORF: 1122 bp

Locus ID: 95

UniProt ID:Q03154Cytogenetics:3p21.2Protein Families:Protease

Protein Pathways: Arginine and proline metabolism, Metabolic pathways

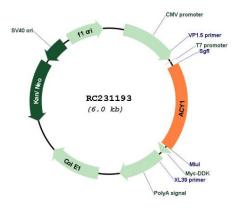
MW: 42.6 kDa

Gene Summary: This gene encodes a cytosolic, homodimeric, zinc-binding enzyme that catalyzes the

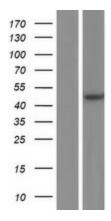
hydrolysis of acylated L-amino acids to L-amino acids and an acyl group, and has been postulated to function in the catabolism and salvage of acylated amino acids. This gene is located on chromosome 3p21.1, a region reduced to homozygosity in small-cell lung cancer (SCLC), and its expression has been reported to be reduced or undetectable in SCLC cell lines and tumors. The amino acid sequence of human aminoacylase-1 is highly homologous to the porcine counterpart, and this enzyme is the first member of a new family of zinc-binding enzymes. Mutations in this gene cause aminoacylase-1 deficiency, a metabolic disorder characterized by central nervous system defects and increased urinary excretion of N-acetylated amino acids. Alternative splicing of this gene results in multiple transcript variants. Read-through transcription also exists between this gene and the upstream ABHD14A (abhydrolase domain containing 14A) gene, as represented in GeneID:100526760. A related pseudogene has been identified on chromosome 18. [provided by RefSeq, Nov 2010]



Product images:



Circular map for RC231193



Western blot validation of overexpression lysate (Cat# [LY434192]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC231193 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).