

Product datasheet for RC231170

Aminoacylase 1 (ACY1) (NM_001198896) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aminoacylase 1 (ACY1) (NM_001198896) 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 Sequence:	<p>>RC231170 representing NM_001198896</p> <p>Red=Cloning site Blue=ORF Green=Tags(s)</p>

TTTTGTATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGACCAGCAAGGGTCCCGAGGAGGAGCACCCATCGGTGACGCTCTTCCGCCAGTACCTGCGTATCCGCA
 CTGTCCAGCCCAAGCCTGACTATGGAGCTGCTGTGGCTTTCTTTGAGGAGACAGCCCGCCAGCTGGGCT
 GGGCTGTCAGAAAGTAGAGGTGGCACCTGGCTATGTGGTGACCGTGTGACCTGGCCAGGCACCAACCT
 ACACTCTCCTCCATCTTGCTCACTCCACACGGATGTGGTGCCTGTCTCAAGGAACATTGGAGTCAGC
 ACCCTTTGAGGCCTTCAAGGATTCTGAGGGCATAGCCAATCCCACTGATGCCTTCACTGTCTTTATAG
 TGAGCGGAGTCCCTGGTGGGTGCGGTTACCAGCACTGGGAGGCCAGGCCATGCCTCACGCTTCATGGAG
 GACACAGCAGCAGAGAAGCTGCAACAAGTTGTAACTCCATCCTGGCATTCCGGGAGAAGGAATGGCAGA
 GGCTGCAGTCAAACCCCACTGAAAGAGGGTCCGTGACCTCCGTGAACCTGACTAAGCTAGAGGGTGG
 CGTGGCTATAACGTGATACCTGCCACCATGAGCGCCAGCTTTGACTTCCGTGTGGCACCAGGATGTGGAC
 TTCAAGGCTTTTGGAGGAGCAGTGCAGAGCTGGTGCCAGGCAGCTGGCGAGGGGGTCAACCTAGAGTTTG
 CTCAGAAGTGGATGCACCCCAAGTGACACCTACTGATGACTCAAACCTTGGTGGGCAGCTTTAGCCG
 GGTCTGAAGGATATGAACCTCACTCTGGAGCCTGAGATCATGCCTGCTGCCACTGACAACCGCTATATC
 CGCGCGGTGGGGTCCCAGCTCTAGGCTTCTACCCATGAACCGCACACCTGTGCTGCTGCACGACCAGC
 ATGAACGGCTGCATGAGGCTGTGTTCTCCGTGGGTGGACATATATACACGCTGCTGCCTGCCCTTGC
 CAGTGTGCTGCCCTGCCAGTGACAGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC231170 representing NM_001198896
 Red=Cloning site Green=Tags(s)

MTSKGPREEHPSVTLFRQYLRIQVQPKPDYGA AVAFEEETARQLGLGCQKVEVAPGYVVTVLTPWGTNP
 TLSSILLNSHTDVPVFKEHWSHDPFEAFKDSEGIANPTDAFTVFYSERSPWVVRVTSTGRPGHASRFME
 DTAAEKLHKVNSILAFREKEWQRLQSNPHLKEGSVTSVNLTKLEGGVAYNVIPATMSASFDFRVAPDVD
 FKAFEEQLQSWCQAAGEGVTLFAQKWMHPQVTPPTDDSNPWAAFSRVCKDMNLTLEPEIMPAATDNRYI
 RAVGVPALGFSMNRTPLVLLHDHDERLHEAVFLRGVDIYTRLLPALASVPALPSDS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8053_a07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001198896

ORF Size: 1008 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_001198896.2](#)

RefSeq ORF: 1011 bp

Locus ID: 95

UniProt ID: [Q03154](#)

Cytogenetics: 3p21.2

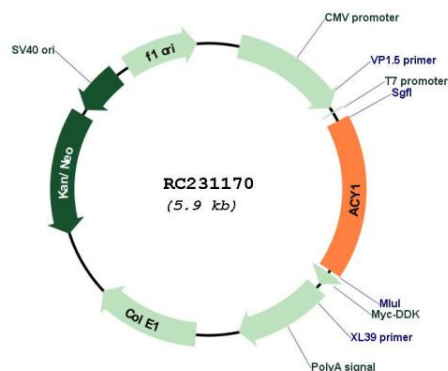
Protein Families: Protease

Protein Pathways: Arginine and proline metabolism, Metabolic pathways

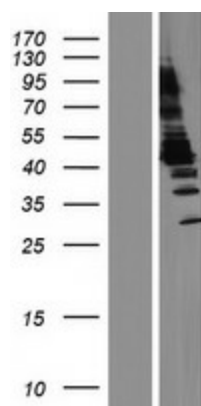
MW: 38 kDa

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 GenelD:100526760. A related pseudogene has been identified on chromosome 18. [provided by RefSeq, Nov 2010]

Product images:



Circular map for RC231170



Western blot validation of overexpression lysate (Cat# [LY434169]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC231170 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).