OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RG231176

Aminoacylase 1 (ACY1) (NM_001198897) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aminoacylase 1 (ACY1) (NM_001198897) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Aminoacylase 1
Synonyms:	ACY-1; ACY1D; HEL-S-5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

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>RG231176 representing NM_001198897
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACCAGCAAGGGTCCCGAGGAGGAGCACCCATCGGTGACGCTCTTCCGCCAGTACCTGCGTATCCGCA
CTGTCCAGCCCAAGCCTGACTATGGAGCTGCTGTGGCTTTCTTTGAGGAGACAGCCCGCCAGCTGGGCCT
GGGCTGTCAGAAAGTAGAGGTGGCACCTGGCTATGTGGTGACCGTGTTGACCTGGCCAGGCACCAACCCT
ACACTCTCCTCCATCTTGCTCAACTCCCACACGGATGTGGTGCCTGTCTTCAAGGAACATTGGAGTCACG
ACCCCTTTGAGGCCTTCAAGGATTCTGAGGGCTACATCTATGCCAGGGGTGCCCAGGACATGAAGTGCGT
CAGCATCCAGTACCTGGAAGCTGTGAGGAGGCTGAAGGTGGAGGGCCACCGGTTCCCCAGAACCATCCAC
ATGACCTTTGTGCCTGATGAGGAGGTTGGGGGTCACCAAGGCATGGAGCTGTTCGTGCAGCGGCCTGAGT
TCCACGCCCTGAGGGCAGGCTTTGCCCTGGATGAGGGCATAGCCAATCCCACTGATGCCTTCACTGTCTT
TTATAGTGAGCGGAGTCCCTGGTGGGTGCGGGTTACCAGCACTGGGAGGCCAGGCCATGCCTCACGCTTC
ATGGAGGACACAGCAGCAGAGAAGCTGGCTTTTGAGGAGCAGCTGCAGAGCTGGTGCCAGGCAGCTGGCG
AGGGGGTCACCCTAGAGTTTGCTCAGAAGTGGATGCACCCCCAAGTGACACCTACTGATGACTCAAACCC
TTGGTGGGCAGCTTTTAGCCGGGTCTGCAAGGATATGAACCTCACTCTGGAGCCTGAGATCATGCCTGCT
GCCACTGACAACCGCTATATCCGCGCGGTGGGGGTCCCAGCTCTAGGCTTCTCACCCATGAACCGCACAC
CTGTGCTGCTGCACGACCACGATGAACGGCTGCATGAGGCTGTGTTCCTCCGTGGGGTGGACATATATAC
ACGCCTGCTGCCTGCCCTTGCCAGTGTGCCTGCCCTGCCCAGTGACAGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag -  GTTTAA
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Protein Sequence:

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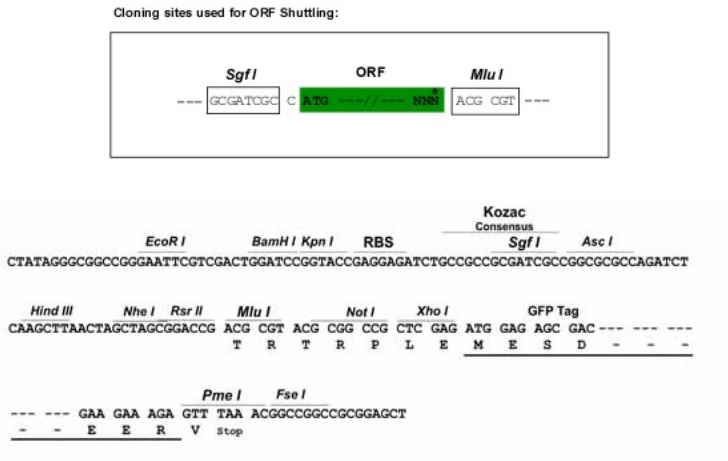
>RG231176 representing NM_001198897
Red=Cloning site Green=Tags(s)

MTSKGPEEEHPSVTLFRQYLRIRTVQPKPDYGAAVAFFEETARQLGLGCQKVEVAPGYVVTVLTWPGTNP
TLSSILLNSHTDVVPVFKEHWSHDPFEAFKDSEGYIYARGAQDMKCVSIQYLEAVRRLKVEGHRFPRTIH
MTFVPDEEVGGHQGMELFVQRPEFHALRAGFALDEGIANPTDAFTVFYSERSPWWVRVTSTGRPGHASRF
MEDTAAEKLAFEEQLQSWCQAAGEGVTLEFAQKWMHPQVTPTDDSNPWWAAFSRVCKDMNLTLEPEIMPA
ATDNRYIRAVGVPALGFSPMNRTPVLLHDHDERLHEAVFLRGVDIYTRLLPALASVPALPSDS

TRTRPLE - GFP Tag -  V
```

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001198897

ORF Size: 1029 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).

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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_001198897.2
RefSeq Size:	1483 bp
RefSeq ORF:	1032 bp
Locus ID:	95
UniProt ID:	Q03154
Cytogenetics:	3p21.2
Protein Families:	Protease
Protein Pathways:	Arginine and proline metabolism, Metabolic pathways
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]

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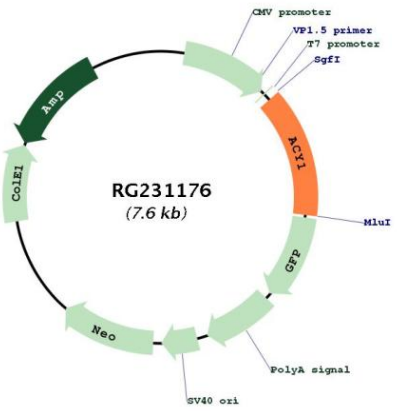
Product images:



Circular map for RG231176

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