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Product datasheet for SC310431

Aminoacylase 1 (ACY1) (NM_000666) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aminoacylase 1 (ACY1) (NM_000666) Human Untagged Clone
Tag:	Tag Free
Symbol:	ACY1
Synonyms:	ACY-1; ACY1D; HEL-S-5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC310431 representing NM_000666. Blue=Insert sequence Red=Cloning site Green=Tag(s) GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC ATGACCAGCAAGGGTCCCGAGGAGGAGCACCCATCGGTGACGCTCTTCCGCCAGTACCTGCGTATCCGC ACTGTCCAGCCCAAGCCTGACTATGGAGCTGCTGTGGCTTTCTTTGAGGAGACAGCCCGCCAGCTGGGC CTGGGCTGTCAGAAAGTAGAGGTGGCACCTGGCTATGTGGTGACCGTGTTGACCTGGCCAGGCACCAAC CCTACACTCTCCTCCATCTTGCTCAACTCCCACACGGATGTGGTGCCTGTCTTCAAGGAACATTGGAGT CACGACCCCTTTGAGGCCTTCAAGGATTCTGAGGGCTACATCTATGCCAGGGGTGCCCAGGACATGAAG TGCGTCAGCATCCAGTACCTGGAAGCTGTGAGGAGGCTGAAGGTGGAGGGCCACCGGTTCCCCAGAACC ATCCACATGACCTTTGTGCCTGATGAGGAGGTTGGGGGTCACCAAGGCATGGAGCTGTTCGTGCAGCGG CCTGAGTTCCACGCCCTGAGGGCAGGCTTTGCCCTGGATGAGGGCATAGCCAATCCCACTGATGCCTTC ACTGTCTTTTATAGTGAGCGGAGTCCCTGGTGGGTGCGGGTTACCAGCACTGGGAGGCCAGGCCATGCC TCACGCTTCATGGAGGACACAGCAGCAGAGAAGCTGCACAAGGTTGTAAACTCCATCCTGGCATTCCGG GAGAAGGAATGGCAGAGGCTGCAGTCAAACCCCCACCTGAAAGAGGGGTCCGTGACCTCCGTGAACCTG ACTAAGCTAGAGGGTGGCGTGGCCTATAACGTGATACCTGCCACCATGAGCGCCAGCTTTGACTTCCGT GTGGCACCGGATGTGGACTTCAAGGCTTTTGAGGAGCAGCTGCAGAGCTGGTGCCAGGCAGCTGGCGAG GGGGTCACCCTAGAGTTTGCTCAGAAGTGGATGCACCCCCAAGTGACACCTACTGATGACTCAAACCCT TGGTGGGCAGCTTTTAGCCGGGTCTGCAAGGATATGAACCTCACTCTGGAGCCTGAGATCATGCCTGCT GCCACTGACAACCGCTATATCCGCGCGGTGGGGGTCCCAGCTCTAGGCTTCTCACCCATGAACCGCACA CCTGTGCTGCTGCACGACCACGATGAACGGCTGCATGAGGCTGTGTTCCTCCGTGGGGTGGACATATAT ACACGCCTGCTGCCTGCCCTTGCCAGTGTGCCTGCCCTGCCCAGTGACAGCTGA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
Restriction Sites:	SgfI-MluI

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Plasmid Map:

ACCN:	NM_000666
Insert Size:	1227 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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_000666.2
RefSeq Size:	1678 bp
RefSeq ORF:	1227 bp
Locus ID:	95
UniProt ID:	Q03154
Cytogenetics:	3p21.2
Domains:	Peptidase_M20
Protein Families:	Protease
Protein Pathways:	Arginine and proline metabolism, Metabolic pathways
MW:	45.9 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] Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a). Both variants 1 and 2 encode isoform a.