

Product datasheet for **SC320711**

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: Aminoacylase 1
Synonyms: ACY-1; ACY1D; HEL-S-5
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC (PS100020)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_000666.1
 GGGCGCTGAGAGCGAGCGTGAGCCAGCGACAGGAGAGTGAGCTCACCACGCGCAGCGC
 CATGACCAGCAAGGGTCCCGAGGAGGAGCACCCATCGGTGACGCTCTCCGCCAGTACCT
 GCGTATCCGCACTGTCCAGCCAAAGCCTGACTATGGAGCTGCTGTGGCTTTCTTTGAGGA
 GACAGCCCGCCAGCTGGGCCTGGGCTGTGAGAAAGTAGAGGTGGCACCTGGCTATGTGGT
 GACCGTGTGACCTGGCCAGGCACCAACCCTACTCTCCTCCATCTTGCTCAACTCCCA
 CACGGATGTGGTGCCTGTCTTCAAGGAACATTGGAGTCACGACCCCTTTGAGGCTTCAA
 GGATTCTGAGGGCTACATCTATGCCAGGGGTGCCAGGACATGAAGTGCGTCAGCATCCA
 GTACCTGGAAGCTGTGAGGAGGCTGAAGGTGGAGGGCCACCGTTCCCCAGAACCATCCA
 CATGACCTTTGTGCTGATGAGGAGGTTGGGGTACCAAGGCATGGAGCTGTTCTGTCGA
 GCGGCCTGAGTTCCACGCCCTGAGGGCAGGCTTTGCCCTGGATGAGGGCATAGCCAATCC
 CACTGATGCCTTCACTGTCTTTATAGTGAGCGGAGTCCCTGGTGGGTGCGGGTTACCAG
 CACTGGGAGGCCAGGCCATGCCTCACGCTTCATGGAGGACACAGCAGCAGAGAAGCTGCA
 CAAGGTTGTAAATCCATCCTGGCATTCCGGGAGAAGGAATGGCAGAGGCTGCAGTCAAA
 CCCCCACTGAAAGAGGGGTCCGTGACCTCCGTGAACCTGACTAAGCTAGAGGGTGGCGT
 GGCCTATAACGTGATACCTGCCACCATGAGCGCCAGCTTTGACTTCCGTGTGGCACCGGA
 TGTGGACTTCAAGGCTTTTGGAGGAGCAGCTGCAGAGCTGGTGCCAGGCAGCTGGCGAGGG
 GGTCAACCTAGAGTTTGTCTCAGAAGTGGATGCACCCCAAGTGACACCTACTGATGACTC
 AAACCTTGGTGGGCAGCTTTTAGCCGGTCTGCAAGGATATGAACCTCACTCTGGAGCC
 TGAGATCATGCCTGCTGCCACTGACAACCGCTATATCCGCGCGGTGGGGTCCCAGCTCT
 AGGCTTCTACCCATGAACCGCACACCTGTGCTGCTGCACGACCACGATGAACGGCTGCA
 TGAGGCTGTGTTCCCTCCGTGGGGTGGACATATATACAGCCTGCTGCCTGCCCTTGCCAG
 TGTGCCTGCCCTGCCAGTGACAGCTGAGCCCTGGAACCTCTAAACCTTTGCCCTGGGG
 CTTCCATCCCAACAGTGCCAAGGACCTCCTCTTCCCCCTTCCAATAATAAAGTCTATG
 GACAGGGCTGTCTCTGAAGTACTAAAAAAAAAAAAAAAAAAAAA

Restriction Sites: Please inquire



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ACCN:	NM_000666
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:	<ol style="list-style-type: none">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_000666.1</u> , <u>NP_000657.1</u>
RefSeq Size:	1415 bp
RefSeq ORF:	1227 bp
Locus ID:	95
UniProt ID:	<u>Q03154</u>
Cytogenetics:	3p21.2
Domains:	Peptidase_M20
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 GenID: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.