

Product datasheet for **SC125518**

Antizyme inhibitor 1 (AZIN1) (NM_015878) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Antizyme inhibitor 1 (AZIN1) (NM_015878) Human Untagged Clone
Tag:	Tag Free
Symbol:	Antizyme inhibitor 1
Synonyms:	AZI; AZI1; AZIA1; OAZI; OAZIN; ODC1L
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC125518 sequence for NM_015878 edited (data generated by NextGen Sequencing)

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ATGAAAGGATTTATTGATGATGCAAACACTCCGTTGGCCTGTTGGATGAAGGAACAAC
CTTGAAATGTTATTGATAACTATGTTTATGAACATACCCTGACAGGGAAAAATGCATTT
TTTGTGGGAGATCTTGGAAAGATTGTGAAGAAACACAGTCAATGGCAGAATGTAGTGGCT
CAGATAAAGCCATTCTACACAGTGAAGTCAACTCTGCTCCAGCTGACTTGAGATTTTG
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CCTGAAGGATCTGGTGTAAAGATAATTTCAGAACCCGGAAGCTACTATGTGTCTTCTGCA
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TTTGATAACATGGGAGCAGATTCTTCCATGAACCATCTGCTTTTAAATGATTTTCAGAGG
CCAGCCATTTATTACATGATGTCATTCAGTGATTGGTATGAGATGCAAGATGCTGGAATT
ACTTCAGACTCAATGATGAAGAACTTCTTCTTGTGCCTTCTTGCACTCAGCTGAGCCAA
GAAGACAGCTTTTCCGCTGAAGCTTAA

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Clone variation with respect to NM_015878.4



[View online »](#)

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_015878 unedited
 TTGTAATACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGGCGGCCGAGTTTTT
 CCTTTTTTCTTCTGCCGTGCGCTTCTCTGCCTTCTCTCATCCTTTCTCGCTCTGCTGCTC
 TGCAGTGTGACGAGTCCGAATCCTTCCCACCCAGCCCGCGCCTTTCTCTTTTGCCTG
 CGCTGTTCTATTTCTCCTTCGGCCGCCGCCACTGCTGCACACAGCTGGTGTCCGGTGC
 CGCGCTTTTACCCCAAGTCGTTCCCGCAGCCTATGGCCCAGGCCGCTTGGGTATTTCT
 GCTCAAGGTAACCACATCCCTCTTTAAAAATTCGCCGAAAAAGAGAAGACGCTTTACCC
 GACTCTTTGGGCCGTTATCTCACGGCGAACTTTCTGACCAAGTATACAACCTACCCAGAGG
 GCCTAGGAGAAGTGCTGTATAGAGAGCAGTTTCACTTCAACGCTGAGCCACCTTGGGAAC
 CTAGCTGATGATAGGGGGTTCCATCTCCCAACTTGCCATGGAGGTCTTCACTTCAGAA
 ATCCAAGACTCATATTCATCCAGCTTGGTGTCAAGTGGGCTGTTGCTGCCAGAATTATCT
 TGTGATTATTTGAGAGATGTATCACGTTCTTCTGAAGTACAATCAACTGTAGAAGCCTT
 TGTAGCAGTTTGTGCATATTCTAAAGACCCAGACATAGGCCTTGGTGGCCCGCCTCTT
 GCCTTTTCTGCATTATGACNTTCCGCTTGTGCAATACGGCTGAAAAGAAAGGATTAATT
 GATGAAGCAAACCACTCCCGTTGGCCTTGTGGGATGAACGAAACAAACCTTGGGAATGTC
 ATTGATAACTATGTTTATGAACATACCTTGACGAAAAAAGCATTTTTGGGGAAATCT
 GGCAACATGGGAAACACCACTCC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_015878 unedited
 GTAGGCCCTGGCTATGTGCAACTTGCCATGNCCAGGATAGCACTGGGGAAGGGTCACAGG
 GCTGCCACCCGGGTATCTGTTCCAGGAAAACAGCTATGACCGCGGCCGCAATCTAGAGTCG
 AGTTT
 ATACAAGGGTTACATTAGGTCAACAAATACTATGATGCAATTTTACATTTATTAACACTAC
 AGTTCAAAGCACAAATTTACACATTCTAAATACACTAAACGTTATCTAATGAAGTCACAC
 TGGTCTTCTAACATTTGATATATCTGGGTGAAAGACATGAACTTTACAAGACTTTAAACA
 CAAATCCTTAGTATAAAAAGTGTGTTCTTGTATGTAAACGATTTAATGGGGAACCCAATT
 AATGGGCTTCCATCTCCACTAAGTCATCCATTTTGTGTCATTTTTATTTTAAACGCTTA
 AAGGGTAAGACAAACTGGTAGGTTTAAATCTGGATACATTATCTAAATCTCCATTATCC
 CCAATGAATTATAGATGAAAGCTGATTTTGTCTGGTCCCAATAGCTATTACTAATAGTT
 TTTGTTGCCAAAAGAATTAAGAGAATAAGATTGTTTAAATTTTTTTCCACACTGGAATG
 TTGACCAGACAAGCTTAACTGCAACTTCATATCTAAAGAAGCGTTAATGCCTGTTTAAAG
 CTTCAGCGGAAAAGCTGTCTTCTTGGCTCAGCTGAATGCAAGAAGGCACAAAGAAAAAGT
 TCTTCATCATTGAGTCTGAAGTAATTCCAGCATCTTGCATCTCATACCAATCACTGAATG
 ACATCATGTAATAAATGGCTGGCCTCTGAAAATCATAAAAGCAGTGGTTCATGAAAAGAT
 T

Restriction Sites:

NotI-NotI

ACCN:

NM_015878

Insert Size:

2650 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_015878.4](#), [NP_056962.2](#)

RefSeq Size: 4348 bp

RefSeq ORF: 1347 bp

Locus ID: 51582

UniProt ID: [O14977](#)

Cytogenetics: 8q22.3

Domains: Orn_Arg_deC_N

Protein Families: Druggable Genome

Gene Summary:

The protein encoded by this gene belongs to the antizyme inhibitor family, which plays a role in cell growth and proliferation by maintaining polyamine homeostasis within the cell. Antizyme inhibitors are homologs of ornithine decarboxylase (ODC, the key enzyme in polyamine biosynthesis) that have lost the ability to decarboxylase ornithine; however, retain the ability to bind to antizymes. Antizymes negatively regulate intracellular polyamine levels by binding to ODC and targeting it for degradation, as well as by inhibiting polyamine uptake. Antizyme inhibitors function as positive regulators of polyamine levels by sequestering antizymes and neutralizing their effect. This gene encodes antizyme inhibitor 1, the first member of this gene family that is ubiquitously expressed, and is localized in the nucleus and cytoplasm. Overexpression of antizyme inhibitor 1 gene has been associated with increased proliferation, cellular transformation and tumorigenesis. Gene knockout studies showed that homozygous mutant mice lacking functional antizyme inhibitor 1 gene died at birth with abnormal liver morphology. RNA editing of this gene, predominantly in the liver tissue, has been linked to the progression of hepatocellular carcinoma. Alternatively spliced transcript variants have been described for this gene. [provided by RefSeq, Sep 2014]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longer isoform (1). Variants 1 and 2 encode the same isoform.