

Product datasheet for SC126609

Antizyme inhibitor 1 (AZIN1) (NM_148174) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Antizyme inhibitor 1 (AZIN1) (NM_148174) 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 SC126609 sequence for NM_148174 edited (data generated by NextGen Sequencing)

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ATGAAAGGATTTATTGATGATGCAAACTACTCCGTTGGCCTGTTGGATGAAGGAACAAAC
CTTGAAATGTTATTGATAACTATGTTTATGAACATACCCTGACAGGGAAAAATGCATTT
TTTGTGGGAGATCTTGAAAGATTGTGAAGAAACACAGTCAATGGCAGAATGTAGTGGCT
CAGATAAAGCCATTCTACACAGTGAAGTCAAACTCTGCTCCAGCTGTACTTGAGATTTTG
GCAGCTCTTGGAACCGGATTTGCTTGTCCAGTAAAAATGAAATGGCTTTAGTGAAGAG
TTGGGTGTACCTCCAGAAAACATTATTTACATAAGTCTTGAAGCAAGTGTCTCAGATA
AAGTATGCAGCAAAAGTTGGAGTGAATATCCTGACATGTGACAATGAAATTGAATTGAAG
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ATTGGAGGTGAAGAGGTAAACATGAAGTTTGGCACTACCCTGAAGAACTGTAGGCATCTC
TTGGAATGTGCTAAGGAACTTGATGTCCAATAATTGGGGTTAAATTTTCATGTTTCGAGT
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CCTGAAGGATCTGGTGTAAAGATAATTTCAGAACCCGGAAGCTACTATGTGTCTTCTGCA
TTTACACTCGCAGTTAATATCATAGCAAGAAAGTTGTTGAAAATGATAAATTTCCCTCT
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CCAGCCATTTATTACATGATGTCATTTCAGTGATTGGTATGAGATGCAAGATGCTGGAATT
ACTTCAGACTCAATGATGAAGAAGCTTCTCTTTGTGCCTTCTTGCAATTCAGCTGAGCCAA
GAAGACAGCTTTTCCGCTGAAGCTTAA
  
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Clone variation with respect to NM_148174.2



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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_148174 unedited
 TTTTGTAAACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGCACAGCTGGTGT
 GGTGCCGCGCTTTTACCCCAAGTCGTTCCCGCAGCCTATGGCCAGGCCGCTTGGGTA
 TTTCTGCTCAAGTAACACATCCCTCTTTAAAAATCCGCCGAAAAAGAGAAGACGCTT
 TACCCGACTCTTTGGGCGTTATCTCACGGCGAACTTTCTGACCAAGTATACAACTACCC
 AGAGGGCCTAGGAGAAGTGCTGTATAGAGAGCAGTTCGACTTCAACGCTGAGCCACCTTG
 GGAACCTAGCTGATGATAGGGGGGTTCCATCTCCCAACTTGTCATTNTGTTGCATATTC
 TAAGGACCCAGACATAGGCTTGGTGGCCGCTCTTGTCTTTCCTGGTTTATGACTNTCG
 GCTNTGTGGAATACGGCTGAGATGAAAGGATTTATTGATGATGCAAACTACTCCGTTGGC
 CTGTTGGATGAAGGAACAACTGGAAATGGTATTGATAACTATGTTTATGAACATACCC
 TGACAGGGAAAAATGCATTTTTTGTGGGAGATCTTGGAAAGGATGTGAAGAAACACCGT
 CATTGCCANAATGGAGTGGCTAAAATAAGCCATTCTACCCAGGGAGTGCCACTTTGCTT
 CACCTGACCTGAAATTTTGGCAACTCTTGAACCCGATTTTGTGGTTCCAATAAAAAG
 GAAATGCTTTTAAGGCAAAAGTTGGGGGCCCTCCACAAAACCTTATTT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_148174 unedited
 CGCGGCCCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTACCTTTACAGTTCAATTTA
 CTATATAGAAATCATTGGGTTTTATTTGCAGTTAACTTTTGAAGTGAATTACAATAT
 TATAACAAAAAATTTACATTAATTCAGAACTTTTAGCATACCAAATTGAAATACATAG
 GTTCAAATTTAGATTTATGGCAAACAGTCTTCAAATACAATACAGACATTTCTTAAAAG
 TTACCGTATCATTACATGTGATATTTGCAACTCTGAGCTATTTATAGAACAGCTCT
 CCTGCAGATATGGCAAAGTTGATATGCCATGAAGTTCAAGGCCTGTATAGTCAAGCCAAG
 GACTCAAAGTTGCACCATCTTTAAAAAGGTTTGGCATTCTGGACCACAACAATGCACAA
 CATGTAAAGAAGGTAGGAAACAGTTCCTCCTGTTAAATGGTTAAAAAAGTTACAT
 GGTAGCTTGAATTTTGCATAAAACCCCATATATACCTTGAAAAAGTCAAGGGCAATT
 TGATGGCAATGGATTGGGGCCCTATATATATTTTTTTAATAGAACCCATGAGATTTAA
 ATGGGCATTAATCAAAATCAAAAAATATTAAGCACCTACTGGNNTTAAGAGATTAAATTTA
 TTAGAGATTATGATCAATTTCTTTCCACCTCGAAATCAAGGTGTAAAAACCACTATTA
 AGTGACATTCAACTCCTCCTATGTAGCACAGGTAGAAATTTCTGTCCATTGGCACCAAA
 GTGAGNCACATTTCTCTTGGGAGACAGAATCCACACCTGAACACGAGTAAGTTAGGAAA
 AAAGACCCCTGTTGTNATTACTATTGGGATTCTGAGATCTAGATTCTATTTACTACCAG
 TAACCAAGCAAATCCTGGCACCCTGCAGTTAATT

Restriction Sites:

NotI-NotI

ACCN:

NM_148174

Insert Size:

3910 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).

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_148174.2](#), [NP_680479.1](#)

RefSeq Size: 4202 bp

RefSeq ORF: 1347 bp

Locus ID: 51582

UniProt ID: [Q14977](#)

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 (2) lacks an internal 5' non-coding exon, thus has a shorter 5' UTR compared to variant 1. Variants 1 and 2 encode the same isoform (1).