

Product datasheet for **RG200022**

Antizyme inhibitor 1 (AZIN1) (NM_015878) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Antizyme inhibitor 1 (AZIN1) (NM_015878) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Antizyme inhibitor 1
Synonyms:	AZI; AZI1; AZIA1; OAZI; OAZIN; ODC1L
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG200022 representing NM_015878
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGAAAGGATTTATTGATGATGCAAACACTCCGTTGGCCTGTTGGATGAAGGAACAACCTTGGAAATG
 TTATTGATAACTATGTTTATGAACATACCTGACAGGAAAAATGCATTTTTTGTGGGAGATCTTGGAAA
 GATTGTGAAGAAACACAGTCAATGGCAGAATGTAGTGGCTCAGATAAAGCCATTCTACACAGTGAAGTGC
 AACTCTGCTCCAGCTGTACTTGAGATTTTGGCAGCTCTTGAACCGGATTTGCTTGTCCAGTAAAAATG
 AAATGGCTTTAGTGAAGAGTTGGGTGTACCTCCAGAAAACATTATTACATAAGTCCTTGAAGCAAGT
 GTCTCAGATAAAGTATGCAGCAAAAGTTGGAGTGAATATCCTGACATGTGACAATGAAATTGAATTGAAG
 AAAATTGCACGTAATCACCCAAATGCCAAGGTCTTACTACATATTGCAACAGAAGATAATATTGGAGGTG
 AAGAGGGTAACATGAAGTTTGGCACTACCTGAAGAACTGTAGGCATCTCTTGAATGTGCTAAGGAACT
 TGATGTCCAAATAATTGGGGTAAATTTTCATGTTTCGAGTCTTCAAAGAACTCAAGTATATGTACAT
 GCTCTATCTGATGCTCGATGTGTGTTTGCATGGCTGGAGAAAATTGGCTTACGATGAACATGTTAGACA
 TTGGTGGAGGATTCACGGGAACGAATTTCAATTGGAAGAGGTTAATCATGTTATCAGCCCTCTGTTGGA
 TATCTACTTTCTGAAGGATCTGGTGTAAAGATAATTTGAGAACCAGGAACTACTATGTGTCTTCTGCA
 TTTACACTCGCAGTTAATATCATAGCAAAGAAAGTTGTTGAAAATGATAAATTTCCCTCTGGAGTAGAAA
 AAACCGGAAGTGATGAACCAGCCTTCATGTATTATGAATGATGGTGTATTGTTCTTTTGAAGTAA
 ACTGTCTGAGGACTTAAATACCATTCCAGAGGTTACAAGAAATACAAGGAAGATGAGCCTCTGTTTACA
 AGCAGCCTTTGGGGTCCATCCTGTGATGAGCTTGATCAAATTGTGAAAGCTGTCTTCTTCTGAGCTGA
 ATGTGGGAGATTGGCTTATCTTTGATAACATGGGAGCAGATTCTTCCATGAACCATCTGCTTTTAAATGA
 TTTTCAGAGGCCAGCCATTTATTACATGATGTCATTCAGTATTGGTATGAGATGCAAGATGCTGGAATT
 ACTTCAGACTCAATGATGAAGAATTCTTCTTTGTGCCTTCTTGCATTCAGCTGAGCCAAGAAGACAGCT
 TTTCCGCTGAAGCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG200022 representing NM_015878
 Red=Cloning site Green=Tags(s)

MKGFIDDANYSVGLLDEGTNLGNVIDNYVYEHTLTGKNAFFVGD LGKIVKKHSQWQNVVAQIKPFYTVKC
 NSAPAVLEILAALGTGFACSSKNEMALVQELGVPPENIIYISPKQVVSQIKYAAKVGVNILTCDNEIELK
 KIARNHPNAKVL LHIATEDNIGGEEGNMKGFTTLKNCRHLLLECAKELDVQIIGVKFHVSSACKESQYVYH
 ALSDARCVFDMAGEIGFTMNMLDIGGGFTGTEFQLEEVNHVISPLLDIYFPEGSGVKIISEPGSYVYSSA
 FTLAVNIIAKKVENDKFPSPGVEKTSDEPAFMYYMNDGVYGSFASKLSEDLN IPEVHKKYKEDEPLFT
 SSLWGPSCDEL DQIVESCLLPELVNVDWLI FDNMGADSFHEPSAFNDFQRP AIYYMMSFSDWYEMQDAGI
 TSDSMMKNFFV PSCIQLSQEDSFAEA

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_015878

ORF Size: 1344 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](#)

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).

- 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_015878.5](#)

RefSeq Size: 4348 bp

RefSeq ORF: 1347 bp

Locus ID: 51582

UniProt ID: [O14977](#)

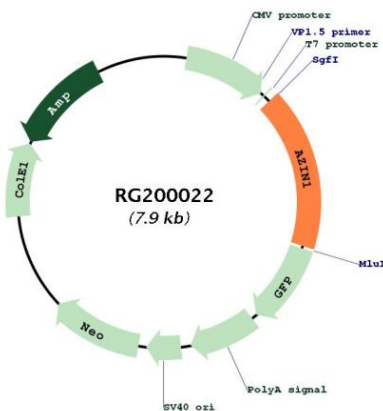
Cytogenetics: 8q22.3

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]

Product images:



Circular map for RG200022