

## Product datasheet for **RG201198**

### Antizyme inhibitor 1 (AZIN1) (NM\_148174) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Antizyme inhibitor 1 (AZIN1) (NM_148174) 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:**

>RG201198 representing NM\_148174  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGAAAGGATTTATTGATGATGCAAACACTCCGTTGGCCTGTTGGATGAAGGAACAACCTTGAAATG  
 TTATTGATAACTATGTTTATGAACATACCTGACAGGGAAAAATGCATTTTTTGTGGGAGATCTTGAAA  
 GATTGTGAAGAAACACAGTCAATGGCAGAATGTAGTGGCTCAGATAAAGCCATTCTACACAGTGAAGTC  
 AACTCTGCTCCAGCTGTACTTGAGATTTTGGCAGCTCTTGAACCGGATTTGCTTGTCCAGTAAAAATG  
 AAATGGCTTTAGTGAAGAGTTGGGTGTACCTCCAGAAAACATTATTACATAAGTCCTTGAAGCAAGT  
 GTCTCAGATAAAGTATGCAGCAAAGTTGGAGTGAATATCCTGACATGTGACAATGAAATTGAATTGAAG  
 AAAATTGCACGTAATCACCCAAATGCCAAGGTCTTACTACATATTGCAACAGAAGATAATATTGGAGGTG  
 AAGAGGGTAACATGAAGTTTGGCACTACCTGAAGAACTGTAGGCATCTCTTGAATGTGCTAAGGAACT  
 TGATGTCCAAATAATTGGGGTAAATTTTCATGTTTCGAGTCTTCAAAGAATCTCAAGTATATGTACAT  
 GCTCTATCTGATGCTCGATGTGTGTTTGCATGGCTGGAGAAAATTGGCTTACGATGAACATGTTAGACA  
 TTGGTGGAGGATTCACGGGAACGAATTTCAATTGGAAGAGGTTAATCATGTTATCAGCCCTCTGTTGGA  
 TATCTACTTTCCTGAAGGATCTGGTGTAAAGATAATTTGAGAACCAGGAACTACTATGTGTCTTCTGCA  
 TTTACACTCGCAGTTAATATCATAGCAAAGAAAGTTGTTGAAAATGATAAATTTCCCTCTGGAGTAGAAA  
 AAACCGGAAGTGATGAACCAGCCTTCATGTATTATGAATGATGGTGTATGTTTCTTTTGAAGTAA  
 ACTGTCTGAGGACTTAAATACCATTCCAGAGGTTACAAGAAATACAAGGAAGATGAGCCTCTGTTTACA  
 AGCAGCCTTTGGGGTCCATCCTGTGATGAGCTTGATCAAATTGTGAAAGCTGTCTTCTCTGAGCTGA  
 ATGTGGGAGATTGGCTTATCTTTGATAACATGGGAGCAGATTCTTCCATGAACCATCTGCTTTTAAATGA  
 TTTTCAGAGGCCAGCCATTTATTACATGATGTCATTCAGTATTGGTATGAGATGCAAGATGCTGGAATT  
 ACTTCAGACTCAATGATGAAGAATTCTTCTTTGTGCCTTCTTGCATTTCAGCTGAGCCAAGAAGACAGCT  
 TTTCCGCTGAAGCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG201198 representing NM\_148174  
 Red=Cloning site Green=Tags(s)

MKGFIDDANYSVGLLDEGTNLGNVIDNYVYEHTLTGKNAFFVGD LGKIVKKHSQWQNVVAQIKPFYTVKC  
 NSAPAVLEILAALGTGFACSSKNEMALVQELGVPPENIIYISPKQVVSQIKYAAKVGVNILTCDNEIELK  
 KIARNHPNAKVL LHIATEDNIGGEEGNMKGFTTLKNCRHLLLECAKELDVQIIGVKFHVSSACKESQYVYH  
 ALSDARCVFDMAGEIGFTMNMLDIGGGFTGTEFQLEEVNHVISPLLDIYFPEGSGVKIISEPGSYVYSSA  
 FTLAVNIIAKKVENDKFP SGVEKTSDEPAFMYMNDGVYGSFASKLSEDLN IPEVHKYKED EPLFT  
 SSLWGPSCDEL DQIVESCLLPELNVGDWLI FDNMGADSFHEPSAFNDFQRPAIYYMMSFSDWYEMQDAGI  
 TSDSMMKNFFV PSCIQLSQEDSFSAEA

TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_148174

**ORF Size:** 1344 bp

**OTI Disclaimer:** 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\\_148174.4](#)

**RefSeq Size:** 4202 bp

**RefSeq ORF:** 1347 bp

**Locus ID:** 51582

**UniProt ID:** [O14977](#)

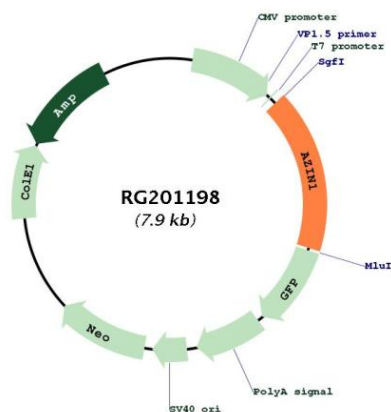
**Cytogenetics:** 8q22.3

**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 RG201198