

Product datasheet for **MC227034**

Azin2 (NM_001301841) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Azin2 (NM_001301841) Mouse Untagged Clone
Tag: Tag Free
Symbol: Azin2
Synonyms: 4933429I20Rik; Ad; Adc; AZ; Azi2; B930082O19; Od; ODC-p; Odcp
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC227034 representing NM_001301841
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGAGTTGGTCCAGCACATTGGTGTCCCTGCCAGTAAGATCATCTGTGCCAACCCCTGTAAGCAAGTTG
 CACAGATCAAGTATGCTGCCAAGCACGGGGTGAGGCTGCTGAGCTTCGACAATGAAGTGGAGCTGGCCAA
 GGTGGTCAAGAGCCACCCAGTGCCAAGATGGTTCTGTGCATTGTACCCAGGACTCCCCTCTCTGAAT
 CACCTGAGCCTGAGGTTTGGGGCGTCGCTGAAATCCTGCAGACATCTGCTCGAGAAGCCAAAGAAGGCC
 ACGTGGAGGTGGTGGGTGTGAGTTTTACATTGGCAGTGGCTGTCTGACCCCTCAGGCCTATGCCAGTC
 CATCGCGGATGCTAGGCTGGTGTTCAGATGGGCGAGGAGCTGGGCCACACGATGAACATCCTGGACCTT
 GGCGGGCGCTTTCCTGGCTTAGAGGGAGCCAAAGTGAGATTTGAAGAGATGGCCTCAGTAATTAATCAG
 CTTGGACCTGTACTCCCTGAGGGCTGCGGTGTGGACATCCTTGCTGAGCTGGGACGCTACTACGTGAC
 GTCTGCCTTCACTGTGGCTGTGAGCATCGTCCCAAGAGGGAGGTTCTGGACCAGCCAGCAGGGAAAGAG
 CAAACCGGCGCAGCCCCAAGAGCATCGTGTACTACCTTGATGAGGGCGTTTATGGGGTCTTCAACTCAG
 TCCTGTTTGACAACACCTGCCCCACCCCGCCCTGCAGAAGAAACCATCTGCGGATCAACCACTGTACAG
 CAGCAGCCTGTGGGGCCAGCAGTTGAAGGCTGCGACTGTGGCTGAGGGCCTGTGGCTGCCCGCAACTA
 CAAGTAGGGGACTGGCTGGTCTTTGACAACATGGGTGCTTACACCGTGGACACAAAGTCCCTCCTTGGGG
 GGACCCAGGCCCGCAGAGTCACTTATGCCATGTCCCGGCTAGCCTGCTCCTGGAAATAT**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001301841
Insert Size: 972 bp



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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:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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_001301841.1</u> , <u>NP_001288770.1</u>
RefSeq Size:	1978 bp
RefSeq ORF:	972 bp
Locus ID:	242669
Cytogenetics:	4 D2.2

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 2, the second member of this gene family. Like antizyme inhibitor 1, antizyme inhibitor 2 interacts with all 3 antizymes and stimulates ODC activity and polyamine uptake. However, unlike antizyme inhibitor 1, which is ubiquitously expressed and localized in the nucleus and cytoplasm, antizyme inhibitor 2 is predominantly expressed in the brain and testis and localized in the endoplasmic reticulum-golgi intermediate compartment. Recent studies indicate that antizyme inhibitor 2 is also expressed in specific cell types in ovaries, adrenal glands and pancreas, and in mast cells. The exact function of this gene is not known, however, available data suggest its role in cell growth, spermiogenesis, vesicular trafficking and secretion. There has been confusion in literature and databases over the nomenclature of this gene, stemming from an earlier report that a human cDNA clone (identical to ODCp/AZIN2) had arginine decarboxylase (ADC) activity (PMID:14738999). Subsequent studies in human and mouse showed that antizyme inhibitor 2 was devoid of arginine decarboxylase activity (PMID:19956990). Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Sep 2014]

Transcript Variant: This variant (2) lacks two consecutive exons in the 5' coding region (which results in translation initiation from an in-frame downstream AUG) and contains a novel 3' terminal exon compared to variant 1. The resulting isoform (2) is shorter with a distinct C-terminus compared to isoform 1.