

## Product datasheet for **MR222916**

### Azin2 (NM\_172875) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Azin2 (NM_172875) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Azin2
Synonyms:	4933429I20Rik; Ad; Adc; AZ; Azi2; B930082O19; Od; ODC-p; Odcp
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR222916 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTGGCTATCTGAGTGAATCGGACTTTGTGATGGTGGAGGAGGGCTTCAGCACCCGGGATCTGCTGG  
 AGGAGCTCACTCTGGGGCCTCCAGGCCACCTCGGGCAAGGTGGCTGCCTTCTTCGTGGCCGACCTGGG  
 TGCTGTAGTGAGGAAGCACTTCTGCTTTCTGAAGCACCTGCCTCGAGTCCGGCCTTTTTATGCTGTGCGG  
 TGCAACAGCAGCCTGGGCGTGCTGAAGTTCTAGCCGAAGTGGGCTGGGCTTCAGCTGTGCCAACAAGG  
 CAGAGATGGAGTTGGTCCAGCACATTGGTGTCCCTGCCAGTAAGATCATCTGTGCCAACCCTGTAAGCA  
 AGTTGCACAGATCAAGTATGCTGCCAAGCACGGGGTGGAGCTGCTGAGCTTCGACAATGAAGTGGAGCTG  
 GCCAAGGTGGTCAAGAGCCACCCAGTCCAAGATGGTTCTGTGCATTGCTACCCAGGACTCCCACTCTC  
 TGAATCACCTGAGCCTGAGGTTTGGGGCGTCGTAAGTCTGCAGACATCTGCTCGAGAACGCCAAGAA  
 GAGCCACGTGGAGGTGGTGGGTGTGAGTTTACATTGGCAGTGGCTGTCTGACCTCAGGCCTATGCC  
 CAGTCCATCGCGGATGCTAGGCTGGTGTTCAGATGGGGCAGGAGCTGGGCCACACGATGAACATCCTGG  
 ACCTTGGCGCGGCTTCTGGCTTAGAGGGAGCCAAAGTGAGATTTGAAGAGATGGCCTCAGTAATTA  
 CTCAGCCTTGGACCTGTACTTCCCTGAGGGCTGCGGTGTGGACATCCTTGTGAGCTGGGACGCTACTAC  
 GTGACGTCTGCCTTCACTGTGGCTGTCAGCATCGTCCGAAGAGGGAGGTTCTGGACCAGGCCAGCAGGG  
 AAGAGCAAACCGCGCAGCCCTAAGAGCATCGTGTACTACCTTGATGAGGGCGTTTATGGGGTCTTCAA  
 CTCAGTCTGTTGACAACACCTGCCCCACCCCGCCCTGCAGAAGAAACCATCTGCGGATCAACCACTG  
 TACAGCAGCAGCCTGTGGGGCCAGCAGTTGAAGGCTGCGACTGTGTGGCTGAGGGCCTGTGGCTGCCG  
 AACTACAAGTAGGGGACTGGCTGGTCTTTGACAACATGGGTGCTTACACCGTGGACACAAAGTCCCTC  
 TGGGGGGACCCAGGCCCGCAGAGTCACTTATGCCATGTCCCGGCTAGCCTGGGAAGCGCTTCGAGGGCAG  
 CTGTTGCCTGCAGAAGAAGACCAGGACGCCGAGGGTGTGTGCAAACCTCTGCTCCTGCGGCTGGGAGATCA  
 CAGACACCTTGTGTGGGCCCTGTCTTACCCAGCAAGCATCATG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR222916 protein sequence  
 Red=Cloning site Green=Tags(s)

MAGYLSSEDFVMVEEGFSTRDLLEELTLGASQATSGKVAFFVADLGA VVRKHFCFLKHLPRV RPFYAVG  
 CNSLGLVKVLAELGLGFSCANKAEMELVQHIGVPASKIICANPCKQVAQIKYAAKHGVRLLSFDNEVEL  
 AKVVKSHPSAKMVLCIATQDHSLSLHSLRFGASLKSCHLLENAKKSHVEVVGVSFHIGSGCPDPQAYA  
 QSIADARLVFQMGEELGHTMNIIDLGGGFPLEGAKVRFEEMASVINSALDLYFPEGCGVDILAELGRYY  
 VTSFTVAVSIVAKREVLDAQSREEQTGAAPKSIYVYLDGEGVYGVFNSVLFNDTCPTPALQKKPSADQPL  
 YSSSLWGPAVEGDCDVAEGLWLPQLQVGDWLVFDNMGAYTVDTKSLLLGGTQARRV TYAMSRLAWEALRGO  
 LLPAEEDQDAEGVCKPLSCGWEITD TLCVGPVFTPASIM

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

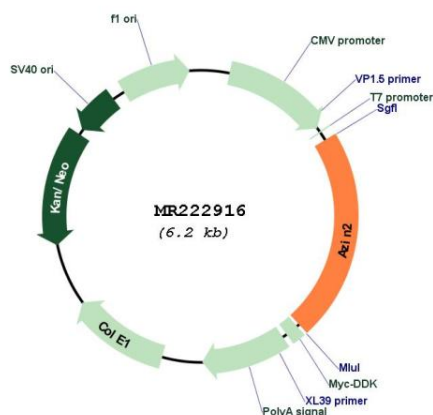


Cytogenetics: 4 D2.2

MW: 49.5 kDa

**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]

## Product images:



Circular map for MR222916