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Product datasheet for RC238352

AZIN2 (NM_001293562) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AZIN2 (NM_001293562) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AZIN2
Synonyms:	ADC; AZI2; AZIB1; ODC-p; ODC1L; ODCp
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

View online »

ORF Nucleotide Sequence:

>RC238352 representing NM_001293562
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTGGCTACCTGAGTGAATCGGACTTTGTGATGGTGGAGGAGGGCTTCAGTACCCGAGACCTGCTGA
AGGAACTCACTCTGGGGGCCTCACAGGCCACCACGGACGAGGTAGCTGCCTTCTTCGTGGCTGACCTGGG
TGCCATAGTGAGGAAGCACTTTTGCTTTCTGAAGTGCCTGCCACGAGTCCGGCCCTTTTATGCTGTCAAG
TGCAACAGCAGCCCAGGTGTGCTGAAGGTTCTGGCCCAGCTGGGGCTGGGCTTTAGCTGTGCCAACAAGG
CAGAGATGGAGTTGGTCCAGCATATTGGAATCCCTGCCAGTAAGATCATCTGCGCCAACCCCTGTAAGCA
AATTGCACAGATCAAATATGCTGCCAAGCATGGGATCCAGCTGCTGAGCTTTGACAATGAGATGGAGCTG
GCAAAGGTGGTAAAGAGCCACCCCAGTGCCAAGATGGTTCTGTGCATTGCTACCGATGACTCCCACTCCC
TGAGCTGCCTGAGCCTAAAGTTTGGAGTGTCACTGAAATCCTGCAGACACCTGCTTGAAAATGCGAAGAA
GCACCATGTGGAGGTGGTGGGTGTGAGTTTTCACATTGGCAGTGGCTGTCCTGACCCTCAGGCCTATGCT
CAGTCCATCGCAGACGCCCGGCTCGTGTTTGAAATGGGCACCGAGCTGGGTCACAAGATGCACGTTCTGG
ACCTTGGTGGTGGCTTCCCTGGCACAGAAGGGGCCAAAGTGAGATTTGAAGAGATTGCTTCCGTGATCAA
CTCAGCCTTGGACCTGTACTTCCCAGAGGGCTGTGGCGTGGACATCTTTGCTGAGCTGGGGCGCTACTAC
GTGACCTCGGCCTTCACTGTGGCAGTCAGCATCATTGCCAAGAAGGAGGTTCTGCTAGACCAGCCTGGCA
GGGAGGAGGAAAATGGTTCCACCTCCAAGACCATCGTGTACCACCTTGATGAGGGCGTGTATGGGATCTT
CAACTCAGTCCTGTTTGACAACATCTGCCCTACCCCCATCCTGCAGAAGAAACCATCCACGGAGCAGCCC
CTGTACAGCAGCAGCCTGTGGGGCCCGGCGGTTGATGGCTGTGATTGCGTGGCTGAGGGCCTGTGGCTGC
CGCAACTACACGTAGGGGACTGGCTGGTCTTTGACAACATGGGCGCCTACACTGTGGGCATGGGTTCCCC
CTTTTGGGGGACCCAGGCCTGCCACATCACCTATGCCATGTCCCGGGTGGCCTGGGAAGCGCTGCGAAGG
CAGCTGATGGCTGCAGAACAGGAGGATGACGTGGAGGGTGTGTGCAAGCCTCTGTCCTGCGGCTGGGAGA
TCACAGACACCCTGTGCGTGGGCCCTGTCTTCACCCCAGCGAGCATCATG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

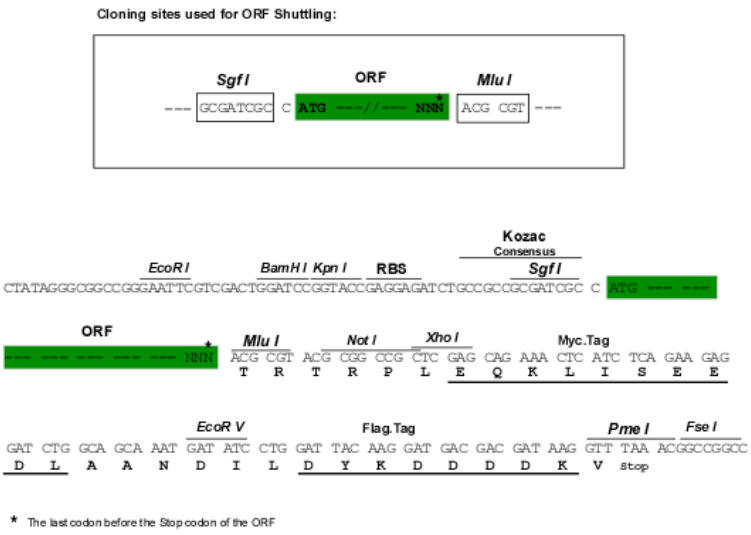
>RC238352 representing NM_001293562
Red=Cloning site Green=Tags(s)

MAGYLSESDFVMVEEGFSTRDLLKELTLGASQATTDEVAAFFVADLGAIVRKHFCFLKCLPRVRPFYAVK
CNSSPGVLKVLAQLGLGFSCANKAEMELVQHIGIPASKIICANPCKQIAQIKYAAKHGIQLLSFDNEMEL
AKVVKSHPSAKMVLCIATDDSHSLSCLSLKFGVSLKSCRHLLENAKKHHVEVVGVSFHIGSGCPDPQAYA
QSIADARLVFEMGTELGHKMHVLDLGGGFPGTEGAKVRFEEIASVINSALDLYFPEGCGVDIFAELGRYY
VTSAFTVAVSIIAKKEVLLDQPGREEENGSTSKTIVYHLDEGVYGIFNSVLFDNICPTPILQKKPSTEQP
LYSSSLWGPAVDGCDCVAEGLWLPQLHVGDWLVFDNMGAYTVGMGSPFWGTQACHITYAMSRVAWEALRR
QLMAAEQEDDVEGVCKPLSCGWEITDTLCVGPVFTPASIM

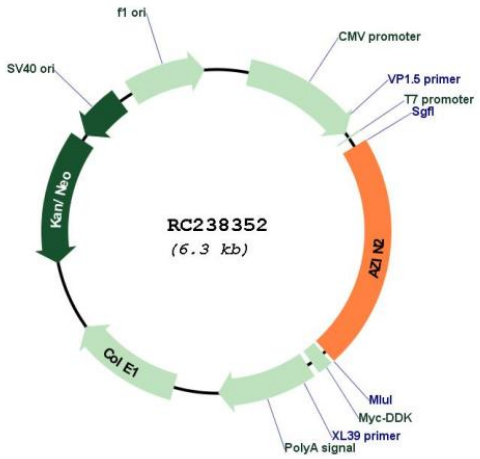
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001293562
ORF Size:	1380 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_001293562.2
RefSeq Size:	2120 bp
RefSeq ORF:	1383 bp
Locus ID:	113451
UniProt ID:	Q96A70
Cytogenetics:	1p35.1
Protein Families:	Druggable Genome
Protein Pathways:	Arginine and proline metabolism, Metabolic pathways
MW:	50.4 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. Accumulation of antizyme inhibitor 2 has also been observed in brains of patients with Alzheimer's disease. 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 described for this gene. [provided by RefSeq, Sep 2014]