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Product datasheet for SC335631

AZIN2 (NM_001301823) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AZIN2 (NM_001301823) Human Untagged Clone
Tag:	Tag Free
Symbol:	AZIN2
Synonyms:	ADC; AZI2; AZIB1; ODC-p; ODC1L; ODCp
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC335631 representing NM_001301823. Blue=Insert sequence Red=Cloning site Green=Tag(s) GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC ATGGAGTTGGTCCAGCATATTGGAATCCCTGCCAGTAAGATCATCTGCGCCAACCCCTGTAAGCAAATT GCACAGATCAAATATGCTGCCAAGCATGGGATCCAGCTGCTGAGCTTTGACAATGAGATGGAGCTGGCA AAGGTGGTAAAGAGCCACCCCAGTGCCAAGATGGTTCTGTGCATTGCTACCGATGACTCCCACTCCCTG AGCTGCCTGAGCCTAAAGTTTGGAGTGTCACTGAAATCCTGCAGACACCTGCTTGAAAATGCGAAGAAG CACCATGTGGAGGTGGTGGGTGTGAGTTTTCACATTGGCAGTGGCTGTCCTGACCCTCAGGCCTATGCT CAGTCCATCGCAGACGCCCGGCTCGTGTTTGAAATGGGCACCGAGCTGGGTCACAAGATGCACGTTCTG GACCTTGGTGGTGGCTTCCCTGGCACAGAAGGGGCCAAAGTGAGATTTGAAGAGATTGCTTCCGTGATC AACTCAGCCTTGGACCTGTACTTCCCAGAGGGCTGTGGCGTGGACATCTTTGCTGAGCTGGGGCGCTAC TACGTGACCTCGGCCTTCACTGTGGCAGTCAGCATCATTGCCAAGAAGGAGGTTCTGCTAGACCAGCCT GGCAGGGAGGAGGAAAATGGTTCCACCTCCAAGACCATCGTGTACCACCTTGATGAGGGCGTGTATGGG ATCTTCAACTCAGTCCTGTTTGACAACATCTGCCCTACCCCCATCCTGCAGAAGAAACCATCCACGGAG CAGCCCCTGTACAGCAGCAGCCTGTGGGGCCCGGCGGTTGATGGCTGTGATTGCGTGGCTGAGGGCCTG TGGCTGCCGCAACTACACGTAGGGGACTGGCTGGTCTTTGACAACATGGGCGCCTACACTGTGGGCATG GGTTCCCCCTTTTGGGGGACCCAGGCCTGCCACATCACCTATGCCATGTCCCGGGTGGCCTGGGAAGCG CTGCGAAGGCAGCTGATGGCTGCAGAACAGGAGGATGACGTGGAGGGTGTGTGCAAGCCTCTGTCCTGC GGCTGGGAGATCACAGACACCCTGTGCGTGGGCCCTGTCTTCACCCCAGCGAGCATCATGTGA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
Restriction Sites:	SgfI-MluI

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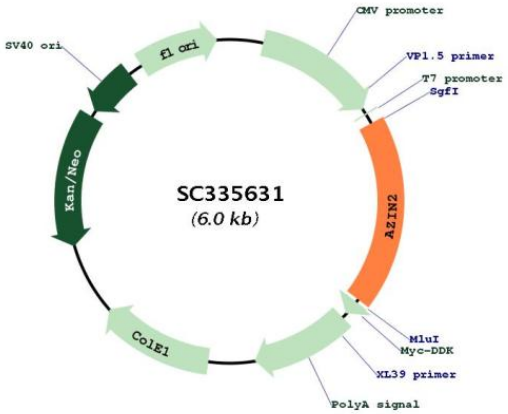
Plasmid Map:



ACCN:	NM_001301823
Insert Size:	1098 bp
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).
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_001301823.1
RefSeq Size:	2023 bp
RefSeq ORF:	1098 bp
Locus ID:	113451
UniProt ID:	Q96A70
Cytogenetics:	1p35.1
Protein Families:	Druggable Genome

Protein Pathways: Arginine and proline metabolism, Metabolic pathways

MW: 39.7 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]
Transcript Variant: This variant (3) has multiple differences at the 5' end, which result in a distinct 5' UTR and translation initiation from an in-frame downstream start codon, compared to variant 1. The encoded isoform (2) has a shorter N-terminus compared to isoform 1. Variants 3, 4, 8, 9, 10 and 11 encode the same isoform (2).