

## Product datasheet for **SC108902**

### Adducin 2 (ADD2) (NM\_001617) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adducin 2 (ADD2) (NM_001617) Human Untagged Clone
Tag:	Tag Free
Symbol:	Adducin 2
Synonyms:	ADDB
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC108902 sequence for NM\_001617 edited (data generated by NextGen Sequencing)

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ATGAGCGAAGAGACGGTCCCCGAGGCTGCCTCGCCGCCGCCCCCGCAGGGGCAGCCTTAC
TTTGACCGCTTCTCAGAGGACGACCCCCAGTACATGCGCCTTCGCAACCGGGCGGGCAG
CTGCGGCAGGACTTCAACCTGATGGAGCAGAAGAAGCGCGTCACCATGATCCTGCAGAGT
CCCTCTTTCAGGGAGGAGCTGGAAGGCCATCCAGGAGCAGATGAAGAAGGGGAACAAC
TCCTCCAACATCTGGGCCCTGCGACAGATCGCGGACTTCATGGCCAGCACCTCCCACGCA
GTCTTCCCGACATCTTCCATGAATGTCTCCATGATGACGCCTATCAATGACCTCCACACA
GCTGACTCCCTGAACCTGGCCAAAGGGGAGCGGCTCATGCGGTGCAAGATCAGCAGTGTC
TACCGACTCCTGGACCTCTATGGCTGGGCCAGCTGAGTGACACCTATGTCACGTTGAGA
GTCAGCAAGGAGCAGGACCATTCTGATCAGCCCTAAGGGAGTTTCTTGACAGTGAAGTC
ACAGCGTCCAGCCTGATCAAGGTGAACATTCTGGGAGAGGTGGTGGAGAAGGGCAGCAGC
TGCTTCCCAGTGGACACCACAGGCTTCTGTCTGCACTCGGCCATCTATGCAGCGAGGCC
GACGTGCGCTGCATCATCCACCTGCACACACCGGCCACAGCAGCGGTGTCGGCCATGAAG
TGGGGCTCCTGCCTGTCTCCACAATGCCCTGCTGGTGGGGACATGGCCTATTATGAC
TTCAATGGGAAATGGAGCAGGAAGCCGATCGGATCAACCTGCAGAAGTGCTTGGACCC
ACCTGCAAGATCCTGGTCTAAGAAACCATGGAGTGGTTGCTCTGGGTGACACGGTAGAG
GAGGCATTTTACAAGATCTTCCACCTGCAGGCTGCATGTGAGATACAGGTGTCGGCTCTG
TCCAGTGCCGGGGGAGTGGAGAACCTCATCCTCCTGGAGCAGGAGAAGCACCGGCCCAT
GAGGTGGGCTCCGTGCAGTGGGCCGGGAGCACCTTTGGGCCTATGCAGAAGAGTCGGCTG
GGGGAGCATGAGTTTGGGCCCTCATGAGGATGCTGGACAACCTGGGCTACAGAACAGGT
TACACGTATCGCCACCCCTTTGTTCAAGAGAAAACCAACACAAAAGTGAAGTGGAGATT
CCAGCCAGGTCACAGCCTTCGTGTTTGGAGGAGCGGTGCCCGGTGCCCGCCCTGCGA
CAGCATGCCCAGAAGCAGCAGAAGGAGAAGACCCGCTGGCTCAATACGCCCAACACCTAC
CTGCGGGTCAATGTGGCCGATGAGGTCCAGAGGAGCATGGGCAGCCCCGACCCAAGACC
ACGTGGATGAAGGCTGACGAGGTGGAGAAATCCAGCAGTGGCATGCCGATTGCGATCGAA
AACCCAAACCAATTTGTGCCTCTCTATACTGACCCCCAGGAAGTACTGGAGATGAGGAAC
AAGATTCGAGAACAAAACCGACAAGATGTGAAGTCAAGGAGGAGGAGGAGGAGGAGGAGG
GCGAGCGTCATTGCCGAGAAGAGCCGAAGCCGCTACAGAGAGCCAGCTGATGTCCAAG
GGAGACGAGGATACCAAGACGATTCAAGGAGAGCGGTGCCCAACCCCTCAGCCAACCTC
ACTGACCAGGAGTTGGAGGAGTACAAGAAAGAGGTGGAGAGGAAGAACTAGAATTGAT
GGAGAGAAAGAACTGCCCCAGAAGAGCCTGGCTCACCTGCAAAGTCTGCACCTGCTTCT
CCAGTGCAGAGCCAGCGAAGGAGGCAGAGACAAAGAGCCCTTTAGTCTCTCCTTCCAAG
TCTTTAGAGGAAGGTAATAAGAAGACAGAAACAAGCAAAGCCGCCACCACAGAGCCCGAA
ACAACCCAGCCGGAAGGGGTGGTGGTCAACGGGAGGGAGGAGGAGCAGACGGCAGAGGAA
ATCCTCAGCAAAGGCTGAGCCAGATGACCACCAAGTGTGACACGGATGTTGATACCTCT
AAGGACAAAACCGAGTCGGTCACCAGCGGCCCATGTCCCAGAGGGCTCACCTTCCAAG
TCTCCCTCAAAGAAGAAAAGAAATTCGAACCCCTCCTTCTGAAAAAGAGCAAAAAG
AAGGAGAAAGTGGAGTCTGA

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Clone variation with respect to NM\_001617.3

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_001617 unedited  
 GGTCAANAATTGTAACGACTCATATAGGGCGGCCGGAATCGGCACGAGGATGGCTTTA  
 ATTCTGACGGCAGGGCTGTGAGGGACTAGCGGGAACCCGAGCCTTTTGTCAAGGAACTGC  
 GGCGTCGGTGGCCAGTCAACCCCGCCGCGGAGCCGCTGCACTGCTGGGGGATCTCCC  
 AGCAGCTCTGACGAGCGGGCTGCAGCATGGGCAGAAAACGCTGCTCTGCAGATTAGCT  
 GGGTGGATTTTTTAAGCGCACCCACCCCAACCCATAAAATAACAAAACCAACCCGC  
 AGTGCCGACCCGAGATAGCTAAGATGCCGCGCAGGAGTTTCCACCTGGATGTTTGAGGT  
 TGTGTAGATGTGGCCGGCACCCCTTGAGAGTGGAGCTAGGGGTGCAGACTGAGCAGTGAA  
 CAGAAGGAGCCTTGACAGGGCTGGGCCAGCCTCCCGAGTTCCAGGAGCGAATTGCAAAAC  
 CCACCGGAAAAATGAGCGAAGAGACGGTCCCGAGGCTGCCTCGCCGCCCGCCCGCAGG  
 GGCAGCCTTACTTTGACCCTTCTCAGAGGACGACCCGAGTACATGCGCCTTCGCACCG  
 GGCNGCGGACCTGCGGCAGGACTTTCACCTGATGGAGCAGAAGAAGCGCGTCACCATGAT  
 CCTGCAGAGTCCCTCTTTCAGGGNAGAGCTGGGANGNCTCATCCAGGAGCAGATGAAGAA  
 GGGGGAACACTNNTCCACATCTGGGGCCCTGCGACAGATCGCGGACTTCATGGCCAGCA  
 CCTCCAACGCAGTCTCCNGGACATCTCCATGAATGTCTCCATGATGACGCCCTATCATG  
 ACCTNCACACAGCTGACTCCCTGAACCTGGCAAAGGGGGAGCGCTCATGCGTGCAGATC  
 AGCAGTGTCTACCGACTCCTGGACCTCTATGGCTGGGCCAGCTGAT

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_001617 unedited  
 ACCGCGGCCGCAATCTAGAGTCGAGTTTTTNNCTTTTTTTTTTTTTTTTTTTTTTTTTT  
 TTTTTTTTTTAAAAAAGGGTTGGTCAAATTTAAGGAGCCACCAAAGGCTCTTTAT  
 TAAAGGCCAAGGAAAACTTGTAAAAATAGTGTGGATTTAAAAACATTAAGTGGGGC  
 CTTTACCAGGCCAAGGAGGGACAGATCGGGACATGGACGGGGTTCCCCAGATTTTTTTT  
 GAAAGTTGTCGCAAGAGGATTAATCTTGAGGGTTAATTTTTGATTCTCTCTGCTGGAC  
 AAAGACGGATTCGGTTGGACCCACAAGGGGGCACGTACGGGTGCCAAAAGTAATACCCC  
 TCTTCCCCTTCTACCTATTCGTTCTGTTGCCCGGTTACGTTTCGTTCCCCTCTTCCC  
 CCCCCGCTTCGCTATTTACCACAACGTCTCTCCCTGTTGGAGCCGAACTTTCGTC  
 TTTCCCCGTAACGAAAGTTCTCTACCCCCCTTCACTTGCCCCCTTTTTCCCC  
 AATTTCTCCTTAAAGAACCCTCACACCCACCCCGCTTACACACCTGCTCCT  
 CTCCTTTTTCCCGTCCCCTTTTTCTTGGTTTTCTGATTTTCCGTTCTCACCTGCGTCT  
 CTTCCCGCACTTTATTTCCGCCCCTTCTCCCCAGCGCTTTTTCTTCCCTCCCCTTTC  
 GCTTCTTAATCCCCTCTCTCGCTTATTGTCTTCGTACATTATCTCCACCGTTGCC  
 TTCTCAGTTCTCCACGGCGGCCGTAACATCACGCGTCAAGTTACTATCTGCTCCTTTTT  
 CCTCTTACCAGCCATCACAGATTTCGCGCCCTTCCCACATTGTTGACTCTCGCACTG  
 TTCTCTTTTTGTTTCTGTACCTTCCCAGCAGCAGCTCTCCCCTCCACTATTCTTTA  
 CACCTCCCCTCTTCTCCGT

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_001617

**Insert Size:**

3780 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\\_001617.1](#), [NP\\_001608.1](#)

**RefSeq Size:** 3932 bp

**RefSeq ORF:** 2181 bp

**Locus ID:** 119

**UniProt ID:** [P35612](#)

**Cytogenetics:** 2p13.3

**Domains:** Aldolase\_II

**Gene Summary:** Adducins are heteromeric proteins composed of different subunits referred to as adducin alpha, beta and gamma. The three subunits are encoded by distinct genes and belong to a family of membrane skeletal proteins involved in the assembly of spectrin-actin network in erythrocytes and at sites of cell-cell contact in epithelial tissues. While adducins alpha and gamma are ubiquitously expressed, the expression of adducin beta is restricted to brain and hematopoietic tissues. Adducin, originally purified from human erythrocytes, was found to be a heterodimer of adducins alpha and beta. Polymorphisms resulting in amino acid substitutions in these two subunits have been associated with the regulation of blood pressure in an animal model of hypertension. Heterodimers consisting of alpha and gamma subunits have also been described. Structurally, each subunit is comprised of two distinct domains. The amino-terminal region is protease resistant and globular in shape, while the carboxy-terminal region is protease sensitive. The latter contains multiple phosphorylation sites for protein kinase C, the binding site for calmodulin, and is required for association with spectrin and actin. Alternatively spliced transcript variants have been described. [provided by RefSeq, Jun 2010]

Transcript Variant: This variant (1) encodes the longest isoform (a). Both variants 1 and 5 encode the same isoform (a).