

## Product datasheet for **RC209517**

### Adducin 2 (ADD2) (NM\_001617) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adducin 2 (ADD2) (NM_001617) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Adducin 2
Synonyms:	ADDB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC209517 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGCGAAGAGACGGTCCCCGAGGCTGCCTCGCCGCCGCCCGCCAGGGGCAGCCTTACTTTGACCGCT  
 TCTCAGAGGACGACCCCGAGTACATGCGCCTTCGCAACCGGGCGGCGACCTGCGGCAGGACTTCAACCT  
 GATGGAGCAGAAGAAGCGCGTCACCATGATCCTGCAGAGTCCCTCTTTACGGGAGGAGCTGGAAGGCCTC  
 ATCCAGGAGCAGATGAAGAAGGGGAACAACTCCTCCAACATCTGGGCCCTGCGACAGATCGCGGACTTCA  
 TGGCCAGCACCTCCACGCAGTCTTCCGACATCTTCCATGAATGTCTCCATGATGACGCCTATCAATGA  
 CCTCCACACAGCTGACTCCCTGAACCTGGCCAAAGGGGAGCGGCTCATGCGGTGCAAGATCAGCAGTGTC  
 TACCGACTCCTGGACCTCTATGGCTGGGCCAGCTGAGTGACACCTATGTACGTTGAGAGTCAGCAAGG  
 AGCAGGACCACTTCTGATCAGCCCTAAGGGAGTTTCTTGCAGTGAAGTACAGCGTCCAGCCTGATCAA  
 GGTGAACATTCTGGGAGAGGTGGTGGAGAAGGGCAGCAGCTGCTTCCAGTGGACACCACAGGCTTCTGT  
 CTGCACTCGGCCATCTATGCAGCGAGGCCCGACGTGCGCTGCATCATCCACCTGCACACACCGGCCACAG  
 CAGCGGTGTCGGCCATGAAGTGGGGCTCCTGCCTGTCTCCACAAATGCCTGCTGGTGGGGGACATGGC  
 CTATTATGACTTCAATGGGGAAATGGAGCAGGAAGCCGATCGGATCAACCTGCAGAAGTGCCCTTGGACCC  
 ACCTGCAAGATCCTGGTCTAAGAAACCATGGAGTGGTTGCTCTGGGTGACACGGTAGAGGAGGCATTTT  
 ACAAGATCTTCCACCTGCAGGCTGCATGTGAGATACAGGTGTGGCTCTGTCCAGTGCAGGGGGAGTGGA  
 GAACCTCATCCTCTGGAGCAGGAGAAGCACCGGCCCATGAGGTGGGCTCCGTGCAGTGGGCCGGGAGC  
 ACCTTTGGGCTATGCAGAAGAGTCGGCTGGGGGAGCATGAGTTTGAGGCCCTCATGAGGATGCTGGACA  
 GGTGGAGATTCCAGCCACGGTACAGCCTTCTGTGTTGAGGAGGACGGTGCCTCGGTGCCCGCCCTGCGA  
 CAGCATGCCCAGAAGCAGCAGAAGGAGAAGACCCGCTGGCTCAATACGCCCAACGCCTACCTGCGGGTCA  
 ATGTGGCCGATGAGGTCCAGAGGAGCATGGGCAGCCCCGACCCAAGACCACGTGGATGAAGGCTGACGA  
 GGTGGAGAAATCCAGCAGTGGCATGCCGATTGCGATCGAAAACCCAAACCAATTTGTGCCTCTCTACT  
 GACCCCCAGGAAGTACTGGAGATGAGGAACAAGATTCGAGAACAAAACCGACAAGATGTGAAGTACGCG  
 GGCCTCAGTCCCAGTCTTGGCGAGCGTATTGCCGAGAAGGCCGAAGCCCGTCTACAGAGAGCCAGCT  
 GATGTCCAAGGGAGACGAGGATACCAAAGACGATTGAGGAGACGGTGCCTCAACCCCTTACGCCAACTC  
 ACTGACCAGGAGTTGGAGGAGTACAAGAAAGAGGTGGAGAGGAAGAACTAGAATTGATGGAGAGAAAG  
 AAAGTGCCTCAGAAGAGCCTGGCTCACCTGCAAAGTCTGCACCTGCTTCTCCAGTGCAGAGCCAGCGAA  
 GGAGGCAGAGACAAGAGCCCTTGTCTCTCTTCAAGTCTTTAGAGGAAGGTAAGAAGACAGAA  
 ACAAGCAAAGCCGCCACCACAGAGCCCGAAACAACCCAGCCGGAAGGGGTGGTGGTCAACGGGAGGGAGG  
 AGGAGCAGACGGCAGAGGAAATCCTCAGCAAAGGCCTGAGCCAGATGACCACCAAGTGTGACACGGATGT  
 TGATACCTTAAGGACAAAACCGAGTCCGTACCAGCGGCCCATGTCCCAGAGGGCTCACCTTCCAAG  
 TCTCCCTCAAAGAAGAAAAGAAATTCGAACCCCTCCTTCTGAAAAGAGCAAAAAGAAGGAGAAAG  
 TGGAGTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC209517 protein sequence  
 Red=Cloning site Green=Tags(s)

```
MSEETVPEAASPPPPQGQPYFDRFSEDDPEYMRLNRRAADLRQDFNLMEQKKRVTMILQSPSFREELEGL
IQEQMKGNNSSNIWALRQIADFMASHTSHAVFPTSSMNVSMMPINDLHTADSLNLAAGERLMRCKISSV
YRLLDLYGWAQLSDTYVTLRVSKEQDHFLLISPKGVSCSEVTASSLIKVNILGEVVEKGSSCFVDTTGFC
LHSAIYAARPDVRCIIHLHTPATAAVSAMKWGLLPVSHNALLVGDMAYYDFNGEMEQEADRINLQKCLGP
TCKILVLRNHGVVALGDTVVEAFYKIFHLQAACEIQVSALSSAGGVENLILLEQEKHRPHEVGSVQWAGS
TFGPMQKSRLGEHEFEALMRMLDNLGYRTGYTYRHPFVQEKTKHKSEVEIPATVTAFFVFEEEDGAPVPALR
QHAQKQKQEKTRWLNTPNAYLRVNADEVQRSMGSPRPKTTWMKADEVKSSSGMPIRIENPNQFVPLYT
DPQEVLEMRNKIREQNRQDVKSAGPQSLLASVIAEKSRSPSTESQLMSKGDEDTKDDSEETVPNPFSQL
TDQLEEEYKKEVERKLELDGEEKETAPEEPGSPAKSAPASPVQSPAKEAETKSPLVSPSKSLEEGTKKTE
TСКААТТЕPЕТТQPEGVVVNGREEEQTAEEILSKGLSQMTTSADTDVDTSKDKTESVTSGPMSPEGSPSK
SPSKKKKKFRTPSFLKSKKKKES
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6524\\_d09.zip](https://cdn.origene.com/chromatograms/mk6524_d09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001617

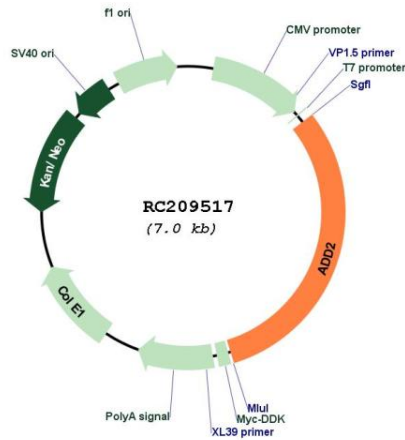
**ORF Size:** 2178 bp

**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](#)

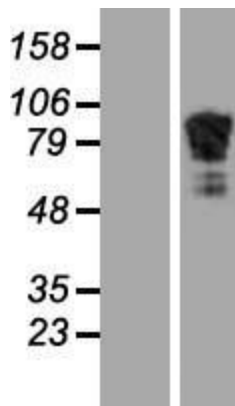
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001617.4</a>
<b>RefSeq Size:</b>	4033 bp
<b>RefSeq ORF:</b>	2181 bp
<b>Locus ID:</b>	119
<b>UniProt ID:</b>	<a href="#">P35612</a>
<b>Cytogenetics:</b>	2p13.3
<b>Domains:</b>	Aldolase_II
<b>MW:</b>	80.8 kDa
<b>Gene Summary:</b>	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]

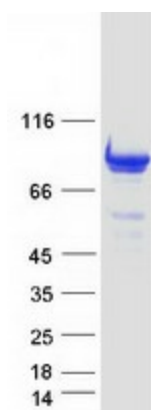
Product images:



Circular map for RC209517



Western blot validation of overexpression lysate (Cat# [LY419845]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209517 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ADD2 protein (Cat# [TP309517]). The protein was produced from HEK293T cells transfected with ADD2 cDNA clone (Cat# RC209517) using MegaTran 2.0 (Cat# [TT210002]).