

Product datasheet for **RG209517**

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:	TurboGFP
Symbol:	ADD2
Synonyms:	ADDB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>RG209517 representing NM_001617
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGAGCGAAGAGACGGTCCCCGAGGCTGCCTCGCCGCCGCCCCCGCAGGGGCAGCCTTACTTTGACCGCT
TCTCAGAGGACGACCCCGAGTACATGCGCCTTCGCAACCGGGCGGCGGACCTGCGGCAGGACTTCAACCT
GATGGAGCAGAAGAAGCGCGTCACCATGATCCTGCAGAGTCCCTCTTTACGGGAGGAGCTGGAAGGCCTC
ATCCAGGAGCAGATGAAGAAGGGGAACAACTCCTCCAACATCTGGGCCCTGCGACAGATCGCGGACTTCA
TGGCCAGCACCTCCACGCAGTCTTCCGACATCTTCCATGAATGTCTCCATGATGACGCCTATCAATGA
CCTCCACACAGCTGACTCCCTGAACCTGGCCAAAGGGGAGCGGCTCATGCGGTGCAAGATCAGCAGTGTC
TACCGACTCCTGGACCTCTATGGCTGGGCCAGCTGAGTGACACCTATGTACGTTGAGAGTCAGCAAGG
AGCAGGACCACTTCTGATCAGCCCTAAGGGAGTTTCTTGCAGTGAAGTACAGCGTCCAGCCTGATCAA
GGTGAACATTCTGGGAGAGGTGGTGGAGAAGGGCAGCAGCTGCTTCCAGTGGACACCACAGGCTTCTGT
CTGCACTCGGCCATCTATGCAGCGAGGCCCGACGTGCGCTGCATCATCCACCTGCACACACCGGCCACAG
CAGCGGTGTCGGCCATGAAGTGGGGCTCCTGCCTGTCTCCACAAATGCCTGCTGGTGGGGGACATGGC
CTATTATGACTTCAATGGGGAAATGGAGCAGGAAGCCGATCGGATCAACCTGCAGAAGTGCCCTTGGACCC
ACCTGCAAGATCCTGGTCTAAGAAACCATGGAGTGGTTGCTCTGGGTGACACGGTAGAGGAGGCATTTT
ACAAGATCTTCCACCTGCAGGCTGCATGTGAGATACAGGTGTGGCTCTGTCCAGTGCAGGGGGAGTGGA
GAACCTCATCCTCTGGAGCAGGAGAAGCACCGGCCCATGAGGTGGGCTCCGTGCAGTGGGCCGGGAGC
ACCTTTGGGCTATGCAGAAGAGTCGGCTGGGGGAGCATGAGTTTGAGGCCCTCATGAGGATGCTGGACA
GGTGGAGATTCCAGCCACGGTACAGCCTTCTGTGTTGAGGAGGACGGTGCCTCCGGTGCCTCCCTGCGA
CAGCATGCCCAGAAGCAGCAGAAGGAGAAGACCCGCTGGCTCAATACGCCCAACGCCTACCTGCGGGTCA
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GGCCTCAGTCCCAGTCTCTGGCAGCGTCATTGCCGAGAAGGCCGAAGCCCGTCTACAGAGAGCCAGCT
GATGTCCAAGGGAGACGAGGATACCAAAGACGATTGAGGAGACGGTGCCTCAACCCCTTACGCCAACTC
ACTGACCAGGAGTTGGAGGAGTACAAGAAAGAGGTGGAGAGGAAGAACTAGAATTGATGGAGAGAAAG
AAACTGCCCCAGAAGAGCCTGGCTCACCTGCAAAGTCTGCACCTGCTTCTCCAGTGCAGAGCCAGCGAA
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AGGAGCAGACGGCAGAGGAAATCCTCAGCAAAGGCCTGAGCCAGATGACCACCAAGTGTGACACGGATGT
TGATACCTTAAGGACAAAACCGAGTCGGTACCAGCGGCCCATGTCCCAGAGGGCTCACCTTCCAAG
TCTCCCTCAAAGAAGAAAAGAAATCCGAACCCCTCCTTCTGAAAAGAGCAAAAAGAAGGAGAAAG
TGGAGTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG209517 representing NM_001617
 Red=Cloning site Green=Tags(s)

MSEETVPEAASPPPPQGQPYFDRFSEDDPEYMRLNRNRAADLRQDFNLMEQKRVTMILQSPSFREELEGL
 IQEQMKGNNSSNIWALRQIADFMASHTSHAVFPTSSMNVSMMPINDLHTADSLNLAAGERLMRCKISSV
 YRLLDLYGWAQLSDTYVTLRVSKEQDHFLLISPKGVSCSEVTASSLIKVNILGEVVEKGSSCFVDTTGFC
 LHSAIYAARPDVRCIIHLHTPATAAVSAMKWGLLPVSHNALLVGDMAYYDFNGEMEQEADRINLQKCLGP
 TCKILVLRNHGVVALGDTVVEAFYKIFHLQAACEIQVSALSSAGGVENLILLEQEKHRPHEVGSVQWAGS
 TFGPMQKSRLGEHEFEALMRMLDNLGYRTGYTYRHPFVQEKTKHKSEVEIPATVTAFFVFEEDGAPVPALR
 QHAQKQKQEKTRWLNTPNAYLRVNVVADEVQRSMGSPRPKTTWMKADEVKSSSGMPIRIENPNQFVPLYT
 DPQEVLEMRNKIREQNRQDVKSAGPQSLLASVIAEKSRSPSTESQLMSKGDEDTKDDSEETVPNPFSQL
 TDQLEEEYKKEVERKKLELDGEEKETAPEEPGSPAKSAPASPVQSPAKEAETKSPLVSPSKSLEEGTKKTE
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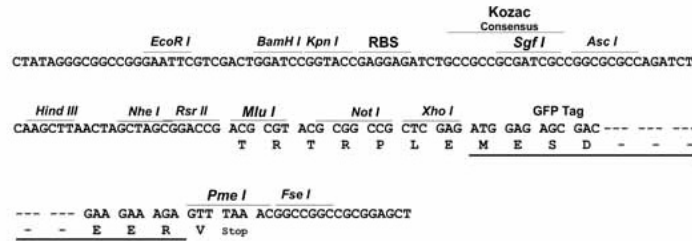
TRTRPLE - GFP Tag - V

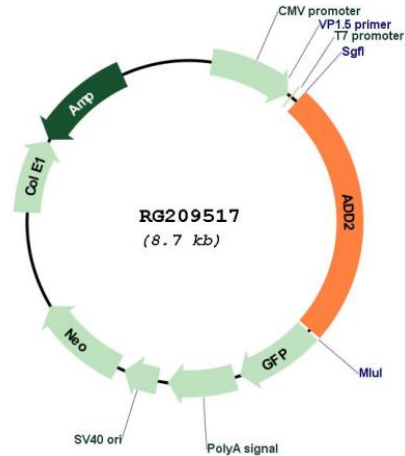
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


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.

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_001617.2](#), [NP_001608.1](#)

RefSeq Size: 3957 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]