

**ADD3 Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP14227b****Specification**

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**ADD3 Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [Q9UEY8](#)**ADD3 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 120**Other Names**

Gamma-adducin, Adducin-like protein 70, ADD3, ADDL

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**ADD3 Antibody (C-term) Blocking Peptide - Protein Information****Name** ADD3**Synonyms** ADDL**Function**

Membrane-cytoskeleton-associated protein that promotes the assembly of the spectrin-actin network. Plays a role in actin filament capping (PubMed:<a href="http://www.uniprot.org/citations/23836506" target="\_blank">23836506</a>). Binds to calmodulin (Probable). Involved in myogenic reactivity of the renal afferent arteriole (Af-art), renal interlobular arteries and middle cerebral artery (MCA) to increased perfusion pressure. Involved in regulation of potassium channels in the vascular smooth muscle cells (VSMCs) of the Af-art and MCA ex vivo. Involved in regulation of glomerular capillary pressure, glomerular filtration rate (GFR) and glomerular nephrin expression in response to hypertension. Involved in renal blood flow (RBF) autoregulation. Plays a role in podocyte structure and function. Regulates globular monomer actin (G-actin) and filamentous polymer actin (F-actin) ratios in the primary podocytes affecting actin cytoskeleton organization. Regulates expression of synaptopodin, RhoA, Rac1 and CDC42 in the renal cortex and the primary podocytes. Regulates expression of nephrin in the glomeruli and in the primary podocytes, expression of nephrin and podocin in the renal cortex, and expression of focal adhesion proteins integrin alpha-3 and integrin beta-1 in the glomeruli. Involved in cell migration and cell adhesion of podocytes, and in podocyte foot process effacement. Regulates expression of profibrotic markers MMP2, MMP9, TGF beta-1, tubular tight junction protein E-

cadherin, and mesenchymal markers vimentin and alpha-SMA (By similarity). Promotes the growth of neurites (By similarity).

#### **Cellular Location**

Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q62847}. Cell membrane {ECO:0000250|UniProtKB:Q62847}; Peripheral membrane protein; Cytoplasmic side. Cytoplasm {ECO:0000250|UniProtKB:Q9QYB5}. Note=Full-length protein and the cleavage fragment 358-706 localize mainly to the cytoplasm, while cleavage fragment 1-357 translocates from the cytoplasm to the nucleus. {ECO:0000250|UniProtKB:Q9QYB5}

#### **Tissue Location**

[Isoform 1]: ubiquitously expressed.

### **ADD3 Antibody (C-term) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **ADD3 Antibody (C-term) Blocking Peptide - Images**

### **ADD3 Antibody (C-term) Blocking Peptide - Background**

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 adducin gamma transcripts encoding different isoforms have been described. The functions of the different isoforms are not known.

### **ADD3 Antibody (C-term) Blocking Peptide - References**

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Garcia-Barcelo, M.M., et al. Hum. Mol. Genet. 19(14):2917-2925(2010) Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009) Seidlerova, J., et al. Am. J. Hypertens. 22(1):21-26(2009)