

**CDC42BPA Blocking Peptide (C-term P1669)**

Synthetic peptide

Catalog # BP7120b

**Specification**

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**CDC42BPA Blocking Peptide (C-term P1669) - Product Information**

Primary Accession

[Q5VT25](#)**CDC42BPA Blocking Peptide (C-term P1669) - Additional Information**

Gene ID 8476

**Other Names**

Serine/threonine-protein kinase MRCK alpha, CDC42-binding protein kinase alpha, DMPK-like alpha, Myotonic dystrophy kinase-related CDC42-binding kinase alpha, MRCK alpha, Myotonic dystrophy protein kinase-like alpha, CDC42BPA {ECO:0000312|EMBL:CAH713361}, KIAA0451

**Target/Specificity**

The synthetic peptide sequence is selected from aa 1669-1683 of HUMAN CDC42BPA

**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.

**CDC42BPA Blocking Peptide (C-term P1669) - Protein Information**

Name CDC42BPA {ECO:0000312|EMBL:CAH71336.1}

Synonyms KIAA0451

**Function**

Serine/threonine-protein kinase which is an important downstream effector of CDC42 and plays a role in the regulation of cytoskeleton reorganization and cell migration (PubMed:<a href="http://www.uniprot.org/citations/15723050" target="\_blank">15723050</a>, PubMed:<a href="http://www.uniprot.org/citations/9418861" target="\_blank">9418861</a>, PubMed:<a href="http://www.uniprot.org/citations/9092543" target="\_blank">9092543</a>). Regulates actin cytoskeletal reorganization via phosphorylation of PPP1R12C and MYL9/MLC2 (PubMed:<a href="http://www.uniprot.org/citations/21457715" target="\_blank">21457715</a>). In concert with MYO18A and LURAP1, is involved in modulating lamellar actomyosin retrograde flow that is crucial to cell protrusion and migration (PubMed:<a href="http://www.uniprot.org/citations/18854160" target="\_blank">18854160</a>). Phosphorylates: PPP1R12A, LIMK1 and LIMK2 (PubMed:<a

href="http://www.uniprot.org/citations/11340065" target="\_blank">11340065</a>, PubMed:<a href="http://www.uniprot.org/citations/11399775" target="\_blank">11399775</a>). May play a role in TFRC-mediated iron uptake (PubMed:<a href="http://www.uniprot.org/citations/20188707" target="\_blank">20188707</a>). In concert with FAM89B/LRAP25 mediates the targeting of LIMK1 to the lamellipodium resulting in its activation and subsequent phosphorylation of CFL1 which is important for lamellipodial F-actin regulation (By similarity). Triggers the formation of an extrusion apical actin ring required for epithelial extrusion of apoptotic cells (PubMed:<a href="http://www.uniprot.org/citations/29162624" target="\_blank">29162624</a>).

#### **Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:O54874}. Cell projection, lamellipodium {ECO:0000250|UniProtKB:Q3UU96}. Note=Displays a dispersed punctate distribution and concentrates along the cell periphery, especially at the leading edge and cell-cell junction. This concentration is PH-domain dependent. Localizes in the lamellipodium in a FAM89B/LRAP25-dependent manner. {ECO:0000250|UniProtKB:O54874, ECO:0000250|UniProtKB:Q3UU96}

#### **Tissue Location**

Abundant in the heart, brain, skeletal muscle, kidney, and pancreas, with little or no expression in the lung and liver.

### **CDC42BPA Blocking Peptide (C-term P1669) - Protocols**

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

- [Blocking Peptides](#)

### **CDC42BPA Blocking Peptide (C-term P1669) - Images**

### **CDC42BPA Blocking Peptide (C-term P1669) - Background**

CDC42BPA is a member of the Serine/Threonine protein kinase family. This kinase contains multiple functional domains. Its kinase domain is highly similar to that of the myotonic dystrophy protein kinase (DMPK). This kinase also contains a Rac interactive binding (CRIB) domain, and has been shown to bind CDC42. It may function as a CDC42 downstream effector mediating CDC42 induced peripheral actin formation, and promoting cytoskeletal reorganization.

### **CDC42BPA Blocking Peptide (C-term P1669) - References**

Dong, J.M., et al., Eur. J. Cell Biol. 81(4):231-242 (2002).  
Tan, I., et al., Mol. Cell. Biol. 21(8):2767-2778 (2001).  
Lam, L.T., et al., Hum. Mol. Genet. 9(14):2167-2173 (2000).  
Nakamura, N., et al., Genes Cells 5(7):571-581 (2000).  
Leung, T., et al., Mol. Cell. Biol. 18(1):130-140 (1998).