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CDC42BPA Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7120a

Specification

CDC42BPA Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q5VT25

CDC42BPA Antibody (N-term) Blocking Peptide - 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 used to generate the antibody AP7120a was selected from the N-term region of human CDC42BPA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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 Antibody (N-term) Blocking Peptide - 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:15723050, PubMed:9092543, PubMed:9418861). Regulates actin cytoskeletal reorganization via phosphorylation of PPP1R12C and MYL9/MLC2 (PubMed:21457715). In concert with MYO18A and LURAP1, is involved in modulating lamellar actomyosin retrograde flow that is

crucial to cell protrusion and migration (PubMed:18854160). Phosphorylates: PPP1R12A, LIMK1 and LIMK2 (PubMed:11340065, PubMed:11399775). May play a role in TFRC-mediated iron uptake (PubMed:20188707). 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:29162624).

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 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

CDC42BPA Antibody (N-term) Blocking Peptide - Images

CDC42BPA Antibody (N-term) Blocking Peptide - 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 Antibody (N-term) Blocking Peptide - 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).