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Anti-MRCK alpha Antibody

Catalog # AP51062

Product Information

Application	WB, IF/IC
Primary Accession	Q5VT25
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	197307

Additional Information

Gene ID	8476
Other Names	KIAA0451; 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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human MRCK alpha. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

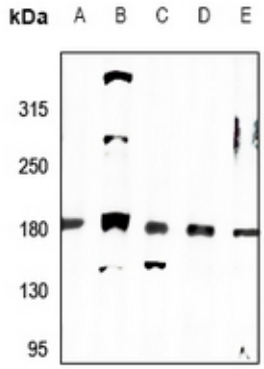
Name	CDC42BPA {ECO:0000312|EMBL:CAH71336.1}
Synonyms	KIAA0451
Function	Serine/threonine-protein kinase which is an important downstream effector of CDC42 and plays a role in the regulation of cytoskeleton reorganization and cell migration (PubMed:15723050, PubMed:9092543, PubMed:9418861). Regulates actin 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.

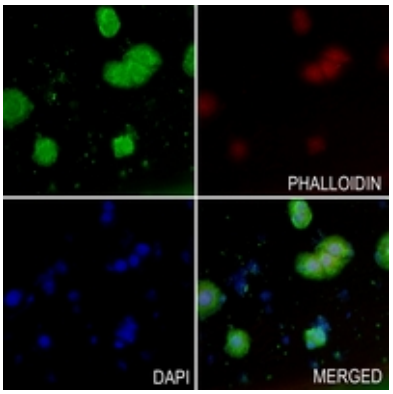
References

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Totoki Y.,et al.Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Gregory S.G.,et al.Nature 441:315-321(2006).
Zhao Y.,et al.J. Biol. Chem. 272:10013-10020(1997).

Images



Western blot analysis of MRCK alpha expression in C6 (A), BV2 (B), HEK293T (C), Panc1 (D), U87MG (E) whole cell lysates. (Predicted band size: 197 kD; Observed band size: 186 kD)



Immunofluorescent analysis of MRCK alpha staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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