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Anti-CDC42 Antibody

Catalog # AP51888

Product Information

Application	WB
Primary Accession	P60953
Reactivity	Human, Mouse, Rat, Zebrafish, Pig, Chicken, Bovine, Dog, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	21259

Additional Information

Gene ID	998
Other Names	Cell division control protein 42 homolog; G25K GTP-binding protein
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human CDC42. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
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

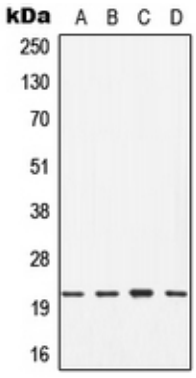
Name	CDC42 (HGNC:1736)
Function	Plasma membrane-associated small GTPase which cycles between an active GTP-bound and an inactive GDP-bound state. In active state binds to a variety of effector proteins to regulate cellular responses. Involved in epithelial cell polarization processes. Regulates the bipolar attachment of spindle microtubules to kinetochores before chromosome congression in metaphase (PubMed:15642749). Regulates cell migration (PubMed:17038317, PubMed:22843693). In neurons, plays a role in the extension and maintenance of the formation of filopodia, thin and actin-rich surface projections (PubMed:14978216). Required for DOCK10-mediated spine formation in Purkinje cells and hippocampal neurons. In podocytes, facilitates filopodia and podosomes formation upon DOCK11-activation (PubMed:33523862). Upon activation by CaMKII, modulates dendritic spine structural plasticity by relaying CaMKII transient activation to synapse-specific, long-term signaling (By similarity). Also plays a role in phagocytosis through organization of the F-actin cytoskeleton associated with forming phagocytic cups (PubMed:26465210). Upon activation by PLEKHG4B,

	involved in actin cytoskeletal remodeling during epithelial cell-cell junction formation (PubMed:33310911). Negatively regulates polymerization of SEPTIN12, as a result may be involved in spermatogenesis (PubMed:30189608).
Cellular Location	Cell membrane; Lipid-anchor; Cytoplasmic side. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle. Midbody Cell projection, dendrite {ECO:0000250|UniProtKB:P60766}. Cytoplasmic vesicle, secretory vesicle, acrosome {ECO:0000250|UniProtKB:P60766} Note=Localizes to spindle during prometaphase cells. Moves to the central spindle as cells progressed through anaphase to telophase (PubMed:15642749). Localizes at the end of cytokinesis in the intercellular bridge formed between two daughter cells (PubMed:15642749). Its localization is regulated by the activities of guanine nucleotide exchange factor ECT2 and GTPase activating protein RACGAP1 (PubMed:15642749). Colocalizes with NEK6 in the centrosome (PubMed:20873783). In its active GTP-bound form localizes to the leading edge membrane of migrating dendritic cells (By similarity) During sperm head formation in elongating spermatids, expressed at the acrosome, perinuclear mantle of the manchette structure and the sperm neck (By similarity). Expressed at the neck and mitochondrial materials in elongated spermatids (By similarity). Expressed at the midpiece in mature spermatozoa (By similarity). {ECO:0000250|UniProtKB:P60766, ECO:0000269|PubMed:15642749, ECO:0000269|PubMed:20873783}

References

Munemitsu S.,et al.Mol. Cell. Biol. 10:5977-5982(1990).
Shinjo K.,et al.Proc. Natl. Acad. Sci. U.S.A. 87:9853-9857(1990).
Rhodes S.,et al.Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases.
Puhl H.L. III,et al.Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
Gregory S.G.,et al.Nature 441:315-321(2006).

Images



Western blot analysis of CDC42 expression in Jurkat (A), HT29 (B), mouse brain (C), rat liver (D) whole cell lysates. (Predicted band size: 21 kD; Observed band size: 21 kD)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.