

CDC42 Rabbit mAb

Catalog # AP75239

Product Information

ApplicationWBPrimary AccessionP60953ReactivityHuman, RatHostRabbit

Clonality Monoclonal Antibody

Calculated MW 21259

Additional Information

Gene ID 998

Other Names CDC42

Dilution WB~~1/500-1/1000

Format 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and

0.05% BSA.

Storage Store at 4°C short term. Aliquot and store at -20°C long term. Avoid

freeze/thaw cycles.

Protein Information

Name CDC42 (<u>HGNC:1736</u>)

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:<u>15642749</u>). Regulates cell migration (PubMed:<u>17038317</u>, PubMed:<u>22843693</u>). In neurons, plays a role in the extension and maintenance of the formation of filopodia, thin and actin-rich surface projections (PubMed:<u>14978216</u>). 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

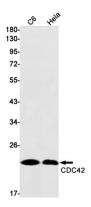
structural plasticity by relaying CaMKII transient activation to

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

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} 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) {ECO:0000250 | UniProtKB:P60766, ECO:0000269 | PubMed:15642749, ECO:0000269 | PubMed:20873783}

Images



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