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# CDC42 Antibody

Rabbit mAb
Catalog # AP90950

## Product Information

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|---|---|
| **Application** | WB, IHC, FC, IP |
| **Primary Accession** | P60953 |
| **Reactivity** | Rat, Human, Mouse |
| **Clonality** | Monoclonal |
| **Other Names** | CDC42; CDC42Hs; G25K; TKS; |
| **Isotype** | Rabbit IgG |
| **Host** | Rabbit |
| **Calculated MW** | 21259 |

## Additional Information

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|---|---|
| **Dilution** | WB 1:1000~1:2000 IHC 1:50~1:200 IP 1:30 FC 1:50 |
| **Purification** | Affinity-chromatography |
| **Immunogen** | A synthesized peptide derived from human CDC42 |
| **Description** | Rac and Cdc42 are members of the Rho-GTPase family. In mammals, Rac exists as three isoforms, Rac1, Rac2 and Rac3, which are highly similar in sequence. Rac1 and Cdc42, the most widely studied of this group, are ubiquitously expressed. Rac and Cdc42 play key signaling roles in cytoskeletal reorganization, membrane trafficking, transcriptional regulation, cell growth and development. |
| **Storage Condition and Buffer** | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle. |

## Protein Information

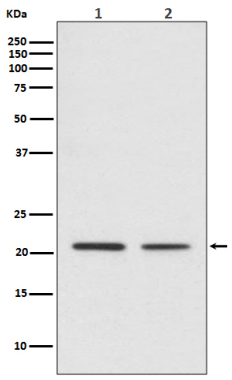
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|---|---|
| **Name** | CDC42 ( HGNC:1736) |
| **Function** | Plasma membrane-associated small GTPase which cycles between an active GTP-bound and an inactive GDP-bound state. In active state binds to a variety of effector proteins to regulate cellular 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}

## Images




Western blot analysis of CDC42 expression in (1) Jurkat cell lysate; (2) Mouse spleen lysate.

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