

CDC42 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51888**Specification**

CDC42 Antibody - Product Information

Application	WB, E
Primary Accession	P60953
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	21 KDa

CDC42 Antibody - Additional Information**Gene ID** 998**Other Names**

Cell division control protein 42 homolog, G25K GTP-binding protein, CDC42

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

CDC42 Antibody - 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](http://www.uniprot.org/citations/15642749)). Regulates cell migration (PubMed: [17038317](http://www.uniprot.org/citations/17038317), PubMed: [22843693](http://www.uniprot.org/citations/22843693)). In neurons, plays a role in the extension and maintenance of the formation of filopodia, thin and actin-rich surface projections (PubMed: [14978216](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/26465210)).

Upon activation by PLEKHG4B, involved in actin cytoskeletal remodeling during epithelial cell-cell junction formation (PubMed:33310911).

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}

CDC42 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CDC42 Antibody - Images

CDC42 Antibody - Background

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. Plays a role in the extension and maintenance of the formation of thin, actin-rich surface projections called filopodia. Mediates CDC42-dependent cell migration.

CDC42 Antibody - 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).