

KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1555**Specification****KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	P60953
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted , 21 kDa , observed , 21 kDa kDa
Gene Name	CDC42
Aliases	CDC42; Cell Division Cycle 42; Cell Division Control Protein 42 Homolog; G25K GTP-Binding Protein; DJ224A6.1.1 (Cell Division Cycle 42 (GTP-Binding Protein, 25kD)); 25kDa; DJ224A6.1.2 (Cell Division Cycle 42 (GTP-Binding Protein, 25kD)); Cell Division Cycle 42 (GTP Binding Protein, 25kDa); Growth-Regulating Protein; Cell Division Cycle 42 (GTP-Binding Protein, 25kD); GTP Binding Protein; 25kDa; GTP Binding Protein; GTP-Binding Protein; 25kD; CDC42Hs; Small GTP Binding Protein CDC42; G25K
Immunogen	Recombinant protein of human CDC42

KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody - Additional Information

Gene ID	998
Other Names	
Cell division control protein 42 homolog, 3.6.5.2, G25K GTP-binding protein, CDC42 (HGNC:1736)	

KD-Validated Anti-CDC42 Rabbit Monoclonal 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). Regulates cell migration (PubMed:17038317).

target="_blank">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).

Cellular Location

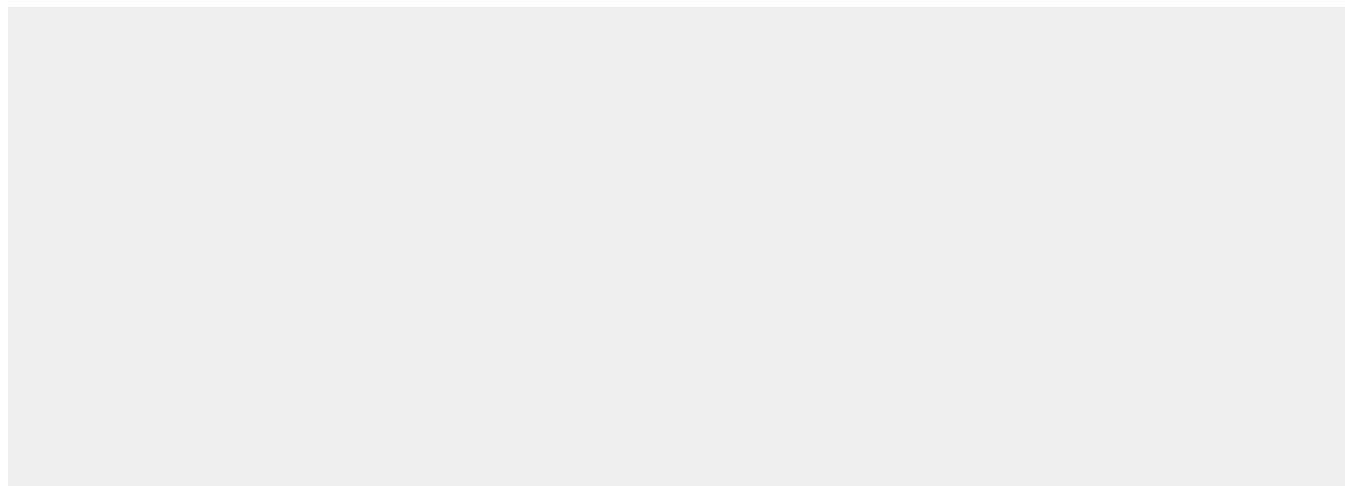
Cell membrane; Lipid-anchor; Cytoplasmic side. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle. Midbody Cell projection, dendrite {ECO:0000250|UniProtKB:P60766} Note=Localizes to spindle during prometaphase cells. Moves to the central spindle as cells 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}

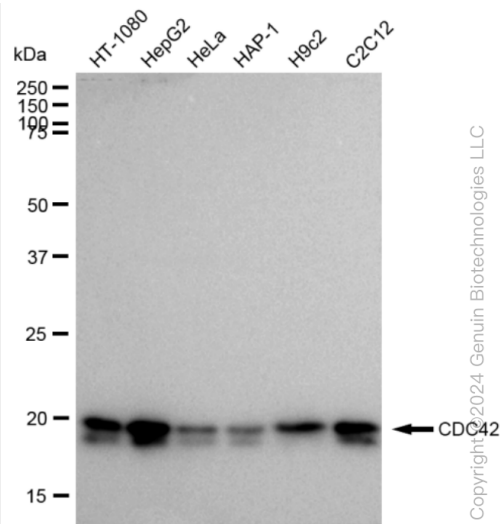
KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody - Protocols

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

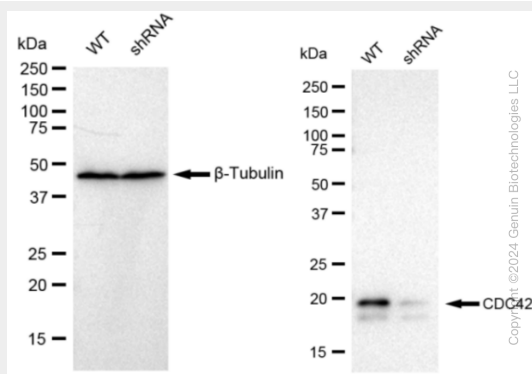
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody - Images

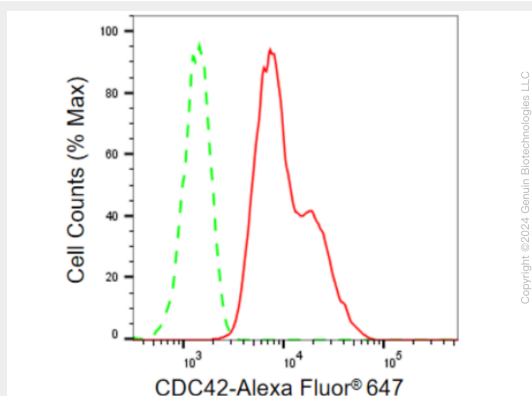




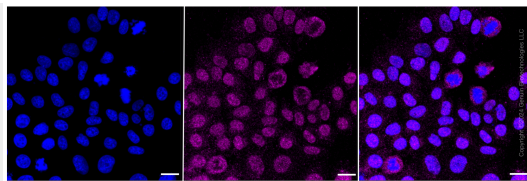
Western blotting analysis using anti-CDC42 antibody (Cat#AGI1555). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-CDC42 antibody (Cat#AGI1555, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-CDC42 antibody (Cat#AGI1555). CDC42 expression in wild type (WT) and CDC42 shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-CDC42 antibody (Cat#AGI1555, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of CDC42 expression in HepG2 cells using CDC42 antibody (Cat#AGI1555, 1:2,000). Green, isotype control; red, CDC42.



Immunocytochemical staining of HepG2 cells with CDC42 antibody (Cat#AGI1555, 1:1,000). Nuclei were stained blue with DAPI; CDC42 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 μ m.