

**KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI1102****Specification****KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<a href="#">P60953</a>
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; CDC42Hs; G25K; Cell Division Control Protein 42 Homolog; GTP Binding Protein, 25kDa; G25K GTP-Binding Protein; DJ224A6.1.1 (Cell Division Cycle 42 (GTP-Binding Protein, 25kD)); DJ224A6.1.2 (Cell Division Cycle 42 (GTP-Binding Protein, 25kD)); Cell Division Cycle 42 (GTP Binding Protein, 25kDa); Cell Division Cycle 42 (GTP-Binding Protein, 25kD); Small GTP Binding Protein CDC42; Growth-Regulating Protein; EC 3.6.5.2; TKS
Immunogen	A synthetic peptide of human CDC42

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

Gene ID	998
<b>Other Names</b>	
Cell division control protein 42 homolog, 3.6.5.2, G25K GTP-binding protein, CDC42 ( <a href="http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=1736" target="_blank">http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=1736</a> )	
target="_blank">HGNC:1736</a>)	

**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:<http://www.uniprot.org/citations/15642749>). Regulates cell migration (PubMed:<http://www.uniprot.org/citations/17038317>, PubMed:<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:<a href="http://www.uniprot.org/citations/14978216" target="\_blank">14978216</a>). Required for DOCK10-mediated spine formation in Purkinje cells and hippocampal neurons. In podocytes, facilitates filopodia and podosomes formation upon DOCK11-activation (PubMed:<a href="http://www.uniprot.org/citations/33523862" target="\_blank">33523862</a>). 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:<a href="http://www.uniprot.org/citations/26465210" target="\_blank">26465210</a>). Upon activation by PLEKHG4B, involved in actin cytoskeletal remodeling during epithelial cell-cell junction formation (PubMed:<a href="http://www.uniprot.org/citations/33310911" target="\_blank">33310911</a>).

#### Cellular Location

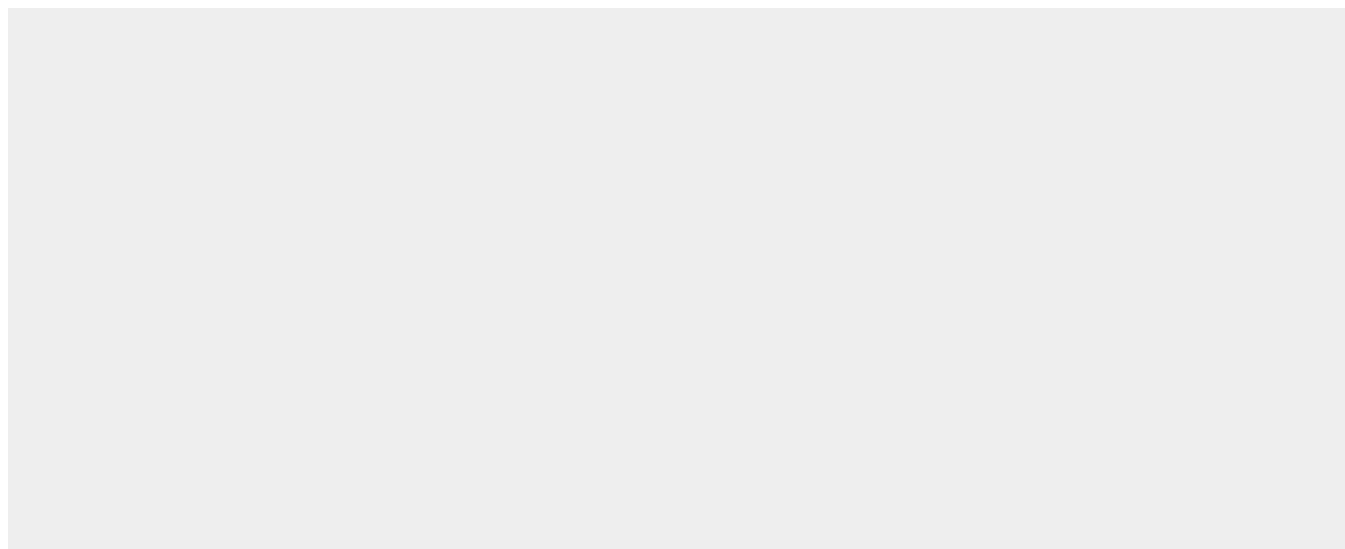
Cell membrane; Lipid-anchor; Cytoplasmic side. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle. Midbody Cell projection, dendrite {ECO:0000250|UniProtKB:P60766} Note=Localizes to spindle during prometaphase cells. Moves to the central spindle as cells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

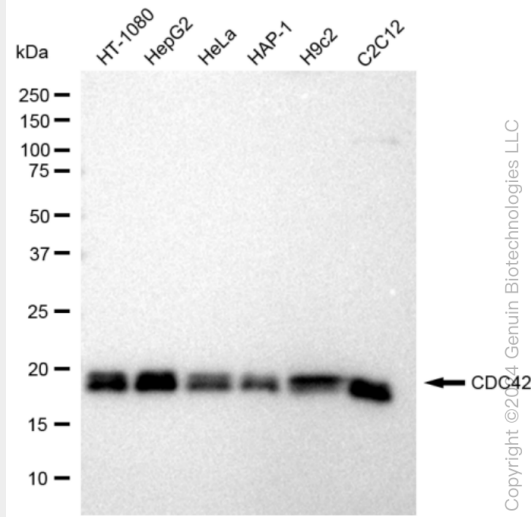
#### KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody - Protocols

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

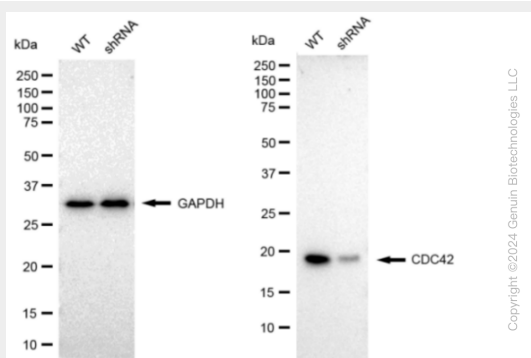
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### KD-Validated Anti-CDC42 Rabbit Monoclonal Antibody - Images

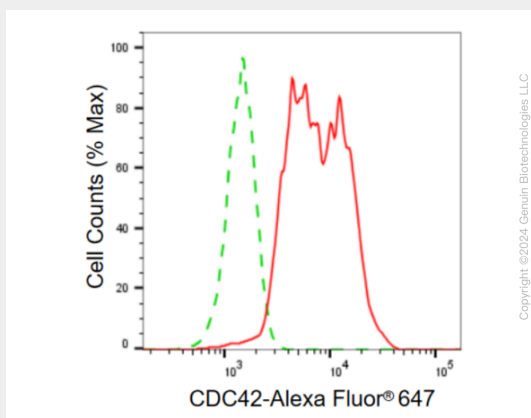




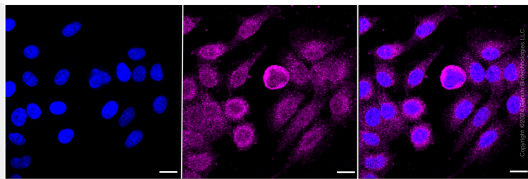
Western blotting analysis using anti-CDC42 antibody (Cat#AGI1102). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-CDC42 antibody (Cat#AGI1102, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-CDC42 antibody (Cat#AGI1102). CDC42 expression in wild type (WT) and CDC42 shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. GAPDH serves as a loading control. The blot was incubated with anti-CDC42 antibody (Cat#AGI1102, 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#AGI1102, 1:2,000). Green, isotype control; red, CDC42.



Immunocytochemical staining of HepG2 cells with CDC42 antibody (Cat#AGI1102, 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  $\mu$ m.