

cdc/Rac Blocking Peptide
Catalog # PBV10032b**Specification**

cdc/Rac Blocking Peptide - Product Information

Primary Accession	P60953
Other Accession	NP_426359.1
Gene ID	998
Calculated MW	21259

cdc/Rac Blocking Peptide - Additional Information**Gene ID 998****Application & Usage**

The peptide is used for blocking the antibody activity of cdc42. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.

Other Names

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

Target/Specificity

cdc/Rac

Formulation

50 µg (0.2 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 1% BSA, 50% glycerol, and 0.02% thimerosal.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

cdc/Rac Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

cdc/Rac Blocking Peptide - 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). 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).

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}

cdc/Rac Blocking Peptide - 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](#)

cdc/Rac Blocking Peptide - Images