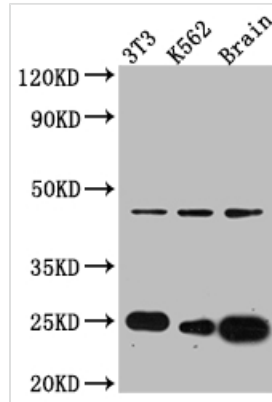




CDC42 Recombinant Monoclonal Antibody

Product Code	CSB-RA177985A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P60953
Immunogen	A synthesized peptide derived from human CDC42
Species Reactivity	Human, Mouse
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	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. Required for DOCK10-mediated spine formation in Purkinje cells and hippocampal neurons. Facilitates filopodia formation upon DOCK11-activation (By similarity).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Cell biology; Signal transduction
Gene Names	CDC42
Clone No.	3C3
Image	



Western Blot

Positive WB detected in: NIH/3T3 whole cell lysate, K562 whole cell lysate, Mouse Brain whole cell lysate

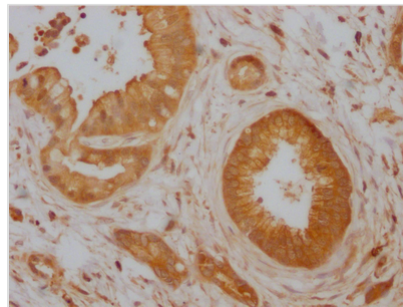
All lanes: CDC42 antibody at 1:1000

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 22, 22 kDa

Observed band size: 24 kDa



IHC image of CSB-RA177985A0HU diluted at 1:100 and staining in paraffin-embedded human pancreatic cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

To develop the CDC42 recombinant monoclonal antibody, several steps are involved. The process begins with the harvesting of the CDC42 monoclonal antibody, followed by genetic sequencing of its code. A vector for the CDC42 monoclonal antibody gene is then created and transfected into a host cell line for culture. A synthesized peptide derived from human CDC42 is used to stimulate the CDC42 monoclonal antibody production. The resulting CDC42 recombinant monoclonal antibody is purified using affinity chromatography to ensure high purity. Finally, ELISA, WB, and IHC assays are carried out to validate the antibody's ability to recognize CDC42. It reacts with human and mouse CDC42 proteins.

The CDC42 plays critical roles in regulating cytoskeletal organization, cell polarity, signal transduction, and vesicle trafficking. CDC42 is involved in the regulation of actin cytoskeletal dynamics, which are essential for cell shape changes, cell movement, and cell division. CDC42 activation leads to the formation of filopodia and lamellipodia, which are important for cell migration. CDC42 is involved in the establishment and maintenance of cell polarity, which is critical for various cellular processes, including cell migration, differentiation, and tissue organization. Dysregulation of CDC42 activity has been implicated in various diseases, including cancer, developmental disorders, and neurodegenerative diseases.