Technical Data Sheet

Purified Mouse Anti-CIP4

Product Information

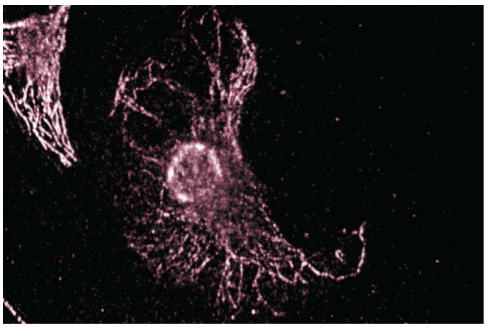
Material Number:	**612557**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	21/CIP4
Immunogen:	Human CIP4 aa. 411-501
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Dog, Mouse, Rat
Target MW:	80 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Rho family members are small GTP binding proteins that serve as molecular switches for a number of biological processes. They cycle between active GTP-bound and inactive GDP-bound states. CDC42 is a Rho family protein that was identified in membranes of human platelets and placenta. It is the homologue of CDC42Sc, which regulates initiation of bud-site assembly in *Saccharomyces cerevisiae*. Similarly, CDC42 regulates the function of the mammalian actin cytoskeleton, allowing for efficient cytokinesis and cell morphogenesis. CDC42-interacting protein 4 (CIP4) was identified in a yeast-two hybrid screen for proteins that bind CDC42. Another variant of CIP4, CIP4/2, was identified that contains an extra 56 amino acids and has 71% identity with CIP4 (or CIP4/1). CIP4 contains a C-terminal SH3 domain and an N-terminal domain that is homologous to non-catalyitic motifs in the tyrosine kinase Fer. The mRNA expression of CIP4 is highest in skeletal muscle, heart, and placenta. Overexpression of CIP4 in Swiss 3T3 cells reduces the amount of stress fibers and leads to clustering of CIP4 to foci at the dorsal side of the cells. In addition, CIP4 binds the Rho-GTPase activating protein RICH and the cytoskeletal protein WASP. Coexpression of CIP4 and WASP in Cos-7 cells leads to WASP association with microtubules. Thus, CIP4 is involved in various protein-protein interactions associated with cytoskeletal dynamics.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Western blot analysis of CIP4 on JAR lysate. *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of anti-CIP4 antibody.*



Immunofluroescent staining of NRK cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Aspenstrom P. A Cdc42 target protein with homology to the non-kinase domain of FER has a potential role in regulating the actin cytoskeleton. *Curr Biol.* 1997; 7(7):479-487.(Biology)

Richnau N, Aspenstrom P. Rich, a rho GTPase-activating protein domain-containing protein involved in signaling by Cdc42 and Rac1. *J Biol Chem.* 2001; 276(37):35060-35070.(Biology)

Tian L, Nelson DL, Stewart DM. Cdc42-interacting protein 4 mediates binding of the Wiskott-Aldrich syndrome protein to microtubules. *J Biol Chem.* 2000; 275(11):7854-7861.(Biology)