

# Cables1 (D-10): sc-374316

## BACKGROUND

Normal Abl function is essential for humans because Philadelphia chromosome translocation involving the ABL gene causes chronic myelogenous leukemia. Abl associates with a broad range of targets and appears to function in various signaling pathway. Cables1, a 568 amino acid protein, links Abl to cyclin-dependent kinase 5 (Cdk5). Cables1 bound to Cdk5 functions as a substrate for phosphorylation by the Cdk5/p35 kinase. Cables contains an area of weak homology to cyclin A and cyclin C. In addition to its C-terminal Cdk5 binding domain, Cables1 also has six potential SH3 binding motifs (PXXP) clustered around the amino-terminus, two of which are similar to motifs known to bind the Abl SH3 domain. Cables1 forms a trimolecular complex with Cdk5 and Abl *in vivo*. All three proteins co-localize within cortical axons, particularly in their growth cones. Cables1 and Abl may function as adaptor or scaffolding proteins to bind to Cdk5 and control its subcellular location in the neuron.

## REFERENCES

1. Oda, T., et al. 1997. Identification and characterization of two novel SH2 domain-containing proteins from a yeast two hybrid screen with the ABL tyrosine kinase. *Oncogene* 15: 1255-1262.
2. Van Etten, R.A. 1999. Cycling, stressed-out and nervous: cellular functions of c-Abl. *Trends Cell Biol.* 9: 179-186.
3. Till, J.H., et al. 1999. Engineering the substrate specificity of the Abl tyrosine kinase. *J. Biol. Chem.* 274: 4995-5003.

## CHROMOSOMAL LOCATION

Genetic locus: CABLES1 (human) mapping to 18q11.2; Cables1 (mouse) mapping to 18 A1.

## SOURCE

Cables1 (D-10) is a mouse monoclonal antibody raised against amino acids 1-280 mapping at the N-terminus of Cables1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cables1 (D-10) is available conjugated to agarose (sc-374316 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374316 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374316 PE), fluorescein (sc-374316 FITC), Alexa Fluor® 488 (sc-374316 AF488), Alexa Fluor® 546 (sc-374316 AF546), Alexa Fluor® 594 (sc-374316 AF594) or Alexa Fluor® 647 (sc-374316 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374316 AF680) or Alexa Fluor® 790 (sc-374316 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Cables1 (D-10) is recommended for detection of Cables1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Cables1 siRNA (h): sc-41913, Cables1 siRNA (m): sc-41914, Cables1 shRNA Plasmid (h): sc-41913-SH, Cables1 shRNA Plasmid (m): sc-41914-SH, Cables1 shRNA (h) Lentiviral Particles: sc-41913-V and Cables1 shRNA (m) Lentiviral Particles: sc-41914-V.

Molecular Weight of human Cables1: 68 kDa.

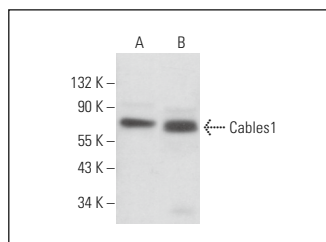
Molecular Weight of mouse Cables1: 61 kDa.

Positive Controls: MIA PaCa-2 whole cell lysate: sc-2285, 3T3-L1 cell lysate: sc-2243 or mouse heart extract: sc-2254.

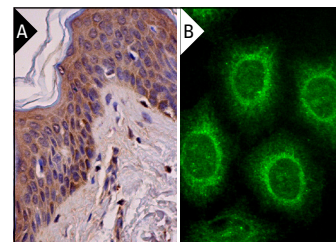
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Cables1 (D-10): sc-374316. Western blot analysis of Cables1 expression in MIA PaCa-2 (A) and 3T3-L1 (B) whole cell lysates.



Cables1 (D-10): sc-374316. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.