

PLEK2 (E-11): sc-393831

BACKGROUND

PLEK2 (pleckstrin 2) is a 353 amino acid peripheral membrane protein that contains both an N- and a C-terminal PH domain, as well as an intervening DEP domain. Although highly homologous to pleckstrin, which contains three phosphorylation sites and is an efficient substrate of PKC, PLEK2 contains a single phosphorylation site and is an inefficient PKC substrate. Localizing to cytoskeleton, PLEK2 is ubiquitously expressed, with highest expression in thymus, prostate, testis, ovary, small bowel and large bowel. When bound to the cell membrane, PLEK2 contributes to lamellipodia formation, with over-expression potentially leading to large lamellipodia and peripheral ruffle formation. PLEK2 targets ligands in cell membranes and induces Actin rearrangement. PLEK2 likely redistributes Actin within cells and may play a role in orchestrating cytoskeletal arrangement. The gene that encodes PLEK2 maps to human chromosome 14q23.3.

REFERENCES

1. Inazu, T., et al. 1999. Cloning and expression of pleckstrin 2, a novel member of the pleckstrin family. *Biochem. Biophys. Res. Commun.* 265: 87-93.
2. Hu, M.H., et al. 1999. Pleckstrin 2, a widely expressed paralog of pleckstrin involved in Actin rearrangement. *J. Biol. Chem.* 274: 21515-21518.
3. Lemmon, M.A., et al. 2002. Pleckstrin homology domains and the cytoskeleton. *FEBS Lett.* 513: 71-76.
4. Inazu, T., et al. 2005. Cloning, expression and chromosomal assignment of human pleckstrin 2. *Mol. Biol. Rep.* 32: 35-40.
5. Hamaguchi, N., et al. 2007. Pleckstrin-2 selectively interacts with phosphatidylinositol 3-kinase lipid products and regulates Actin organization and cell spreading. *Biochem. Biophys. Res. Commun.* 361: 270-275.
6. Bach, T.L., et al. 2007. PI3K regulates pleckstrin-2 in T-cell cytoskeletal reorganization. *Blood* 109: 1147-1155.

CHROMOSOMAL LOCATION

Genetic locus: PLEK2 (human) mapping to 14q23.3; Plek2 (mouse) mapping to 12 C3.

SOURCE

PLEK2 (E-11) is a mouse monoclonal antibody raised against amino acids 96-255 mapping within an internal region of PLEK2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PLEK2 (E-11) is available conjugated to agarose (sc-393831 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393831 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393831 PE), fluorescein (sc-393831 FITC), Alexa Fluor® 488 (sc-393831 AF488), Alexa Fluor® 546 (sc-393831 AF546), Alexa Fluor® 594 (sc-393831 AF594) or Alexa Fluor® 647 (sc-393831 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393831 AF680) or Alexa Fluor® 790 (sc-393831 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PLEK2 (E-11) is recommended for detection of PLEK2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PLEK2 siRNA (h): sc-92127, PLEK2 siRNA (m): sc-152304, PLEK2 shRNA Plasmid (h): sc-92127-SH, PLEK2 shRNA Plasmid (m): sc-152304-SH, PLEK2 shRNA (h) Lentiviral Particles: sc-92127-V and PLEK2 shRNA (m) Lentiviral Particles: sc-152304-V.

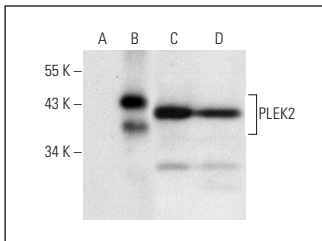
Molecular Weight of PLEK2: 40 kDa.

Positive Controls: PLEK2 (h2): 293T Lysate: sc-172735, DU 145 cell lysate: sc-2268 or PC-3 cell lysate: sc-2220.

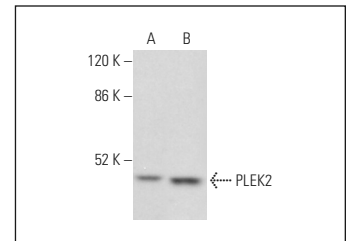
RECOMMENDED SUPPORT REAGENTS

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.

DATA



PLEK2 (E-11): sc-393831. Western blot analysis of PLEK2 expression in non-transfected 293T: sc-117752 (A), human PLEK2 transfected 293T: sc-172735 (B), DU 145 (C) and PC-3 (D) whole cell lysates.



PLEK2 (E-11): sc-393831. Western blot analysis of PLEK2 expression in Caco-2 (A) and Ca Ski (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

STORAGE

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

RESEARCH USE

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

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