SANTA CRUZ BIOTECHNOLOGY, INC.

PARD6B (G-19): sc-54930

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The Power to Question

BACKGROUND

Cellular asymmetry is critical for the development of multicellular organisms. PARD (partitioning-defective) proteins play important roles in asymmetric cell division and polarized growth, whereas Cdc42 and Rac mediate establishment of cell growth and polarity and contribute to oncogenic transformation by Ras. The human PARD6, a 345 amino acid polypeptide, has a PDZ domain and a CRIB-like (Cdc42/Rac interactive binding) motif. PARD6 interacts with GTP-bound Rac and Cdc42 via this motif and with the atypical PKC isoforms PKCι/λ and PKCζ via N-terminal head to head association. These interactions allow formation of a ternary complex *in vitro* and *in vivo*, which is implicated in the formation of normal tight junctions at epithelial cell-cell contacts and is also involved in the polarization of mother cells before asymmetric cell division in *C. elegans*. PARD6 acts through PARD3 by localizing or maintaining the PARD3 protein at the cell periphery. PARD6A, also designated PAR-6α, PAR6C, TAX40 and TIP-40, is expressed in pancreas, skeletal muscle, brain and heart, and is weakly expressed in kidney and placenta. PAR6B is expressed in pancreas and in both adult and fetal kidney, and is weakly expressed in placenta and lung.

REFERENCES

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4. Joberty, G., et al. 2000. The cell-polarity protein PAR6 links PAR3 and atypical protein kinase C to Cdc42. Nat. Cell Biol. 2: 531-539.
5. Lin, D., et al. 2000. A mammalian PAR-3-PAR-6 complex implicated in Cdc42/Rac1 and aPKC signaling and cell polarity. Nat. Cell Biol. 2: 540-547.
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7. Johansson, A., et al. 2000. The mammalian homologue of the *Caenorhabditis elegans* polarity protein PAR6 is a binding partner for the Rho GTPases Cdc42 and Rac1. J. Cell Sci. 13: 3267-3275.
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CHROMOSOMAL LOCATION

Genetic locus: Pard6b (mouse) mapping to 2 H3.

SOURCE

PARD6B (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PARD6B of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54930 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PARD6B (G-19) is recommended for detection of PARD6B of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PARD6B (G-19) is also recommended for detection of PARD6B in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PARD6B siRNA (m): sc-62752, PARD6B shRNA Plasmid (m): sc-62752-SH and PARD6B shRNA (m) Lentiviral Particles: sc-62752-V.

Molecular Weight (predicted) of PARD6B: 41 kDa.

Molecular Weight (observed) of PARD6B: 51-57 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.