SANTA CRUZ BIOTECHNOLOGY, INC.

PARD6A (H-90): sc-25525

SANTA CRUZ BIOTECHNOLOGY

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 PKCω 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.

CHROMOSOMAL LOCATION

Genetic locus: PARD6A (human) mapping to 16q22.1; Pard6a (mouse) mapping to 8 D3.

SOURCE

PARD6A (H-90) is a rabbit polyclonal antibody raised against amino acids 257-346 of PARD6A of human origin.

PRODUCT

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

Available as agarose conjugate for immunoprecipitation, sc-25525 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

PARD6A (H-90) is recommended for detection of PARD6A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

PARD6A (H-90) is also recommended for detection of PARD6A in additional species, including equine and bovine.

Suitable for use as control antibody for PARD6A siRNA (h): sc-40809, PARD6A siRNA (m): sc-40810, PARD6A shRNA Plasmid (h): sc-40809-SH, PARD6A shRNA Plasmid (m): sc-40810-SH, PARD6A shRNA (h) Lentiviral Particles: sc-40809-V and PARD6A shRNA (m) Lentiviral Particles: sc-40810-V.

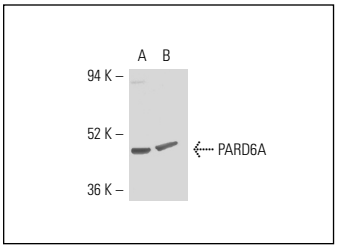
Molecular Weight of PARD6A: 43 kDa.

Positive Controls: L8 cell lysate: sc-3807, MIA PaCa-2 whole cell lysate or mouse brain extract: sc-2253.

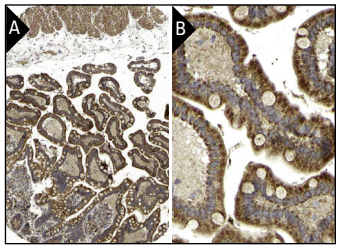
STORAGE

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

DATA



PARD6A (H-90): sc-25525. Western blot analysis of PARD6A expression in L8 whole cell lysate (**A**) and mouse brain tissue extract (**B**).



PARD6A (H-90): sc-25525. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Cohen, D., et al. 2007. PAR1B promotes hepatic-type lumen polarity in Madin Darby canine kidney cells via Myosin II- and E-cadherin-dependent signaling. Mol. Biol. Cell 18: 2203-2215.
2. Kunzevitzky, N.J., et al. 2010. Amacrine cell gene expression and survival signaling: differences from neighboring retinal ganglion cells. Invest. Ophthalmol. Vis. Sci. 51: 3800-3812.
3. Valkov, A., et al. 2011. The prognostic Impact of TGF-β1, fascin, NF-κB and PKC-ζ expression in soft tissue sarcomas. PLoS ONE 6: e17507.
4. Park, S.R., et al. 2012. Preferential cytotoxic effect of genistein on G361 melanoma cells via inhibition of the expression of focal adhesion kinase. Int. J. Oral Biol. 37: 189-195.

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.