

PARD6A (C-3): sc-365323

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 PKC λ and PKC ζ 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-6 α , 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 (C-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-27 at the N-terminus of PARD6A of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PARD6A (C-3) is available conjugated to agarose (sc-365323 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365323 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365323 PE), fluorescein (sc-365323 FITC), Alexa Fluor[®] 488 (sc-365323 AF488), Alexa Fluor[®] 546 (sc-365323 AF546), Alexa Fluor[®] 594 (sc-365323 AF594) or Alexa Fluor[®] 647 (sc-365323 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365323 AF680) or Alexa Fluor[®] 790 (sc-365323 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365323 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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.

PROTOCOLS

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

APPLICATIONS

PARD6A (C-3) is recommended for detection of PARD6A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

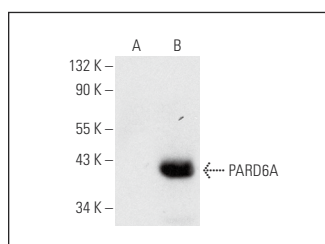
PARD6A (C-3) is also recommended for detection of PARD6A in additional species, including equine, bovine and porcine.

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.

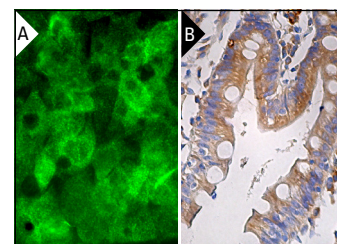
Molecular Weight of PARD6A: 43 kDa.

Positive Controls: PARD6A (h): 293T Lysate: sc-173794, mouse brain extract: sc-2253 or L8 cell lysate: sc-3807.

DATA



PARD6A (C-3): sc-365323. Western blot analysis of PARD6A expression in non-transfected: sc-117752 (A) and human PARD6A transfected: sc-173794 (B) 293T whole cell lysates.



PARD6A (C-3): sc-365323. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Zhu, Y.C., et al. 2017. Suppression of CIP4/PAR6 attenuates TGF- β 1-induced epithelial-mesenchymal transition in NRK-52E cells. *Int. J. Mol. Med.* 40: 1165-1171.
- Farrell, A., et al. 2019. Faulty oxygen sensing disrupts angiotensin function in trophoblast cell migration and predisposes to preeclampsia. *JCI Insight* 4: e127009.
- Liu, P., et al. 2020. Par6 regulates cell cycle progression through enhancement of Akt/PI3K/GSK-3 β signaling pathway activation in glioma. *FASEB J.* 34: 1481-1496.
- Yu, Z., et al. 2021. Hepatocyte growth factor-regulated tyrosine kinase substrate is essential for endothelial cell polarity and cerebrovascular stability. *Cardiovasc. Res.* 117: 533-546.

RESEARCH USE

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