SANTA CRUZ BIOTECHNOLOGY, INC.

PARD3B (E-9): sc-398761

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. PARD3B (par-3 partitioning defective 3 homolog B), also known as PAR3B, PAR3β, PAR3L, PAR3LC or Par3Lb, is a 1,205 amino acid putative adapter protein of the endomembrane system that participates in cell polarization and asymmetrical cell division. Likely involved in epithelial tight junction formation, PARD3B localizes to the cell junction where it colocalizes with ZO-1 (zona occludens protein 1). PARD3B is expressed in a variety of tissues with highest expression found in skeletal muscle, lung and kidney, and moderate levels found in pancreas, brain, heart, liver, placenta. Existing as five alternatively spliced isoforms, PARD3B contains three PDZ (DHR) domains and is encoded by a gene located on human chromosome 2q33.3.

REFERENCES

1. Hadano, S., et al. 2001. A gene encoding a putative GTPase regulator is mutated in familial amyotrophic lateral sclerosis 2. Nat. Genet. 29: 166-173.
2. Kohjima, M., et al. 2002. PAR3β, a novel homologue of the cell polarity protein PAR3, localizes to tight junctions. Biochem. Biophys. Res. Commun. 299: 641-646.
3. Gao, L., et al. 2002. Multiple splice variants of Par3 and of a novel related gene, Par3L, produce proteins with different binding properties. Gene 294: 99-107.
4. Warner, D.R., et al. 2003. Identification of three novel Smad binding proteins involved in cell polarity. FEBS Lett. 539: 167-173.

CHROMOSOMAL LOCATION

Genetic locus: PARD3B (human) mapping to 2q33.3; Pard3b (mouse) mapping to 1 C2.

SOURCE

PARD3B (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 86-117 near the N-terminus of PARD3B of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PARD3B (E-9) is available conjugated to agarose (sc-398761 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398761 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398761 PE), fluorescein (sc-398761 FITC), Alexa Fluor® 488 (sc-398761 AF488), Alexa Fluor® 546 (sc-398761 AF546), Alexa Fluor® 594 (sc-398761 AF594) or Alexa Fluor® 647 (sc-398761 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398761 AF680) or Alexa Fluor® 790 (sc-398761 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398761 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

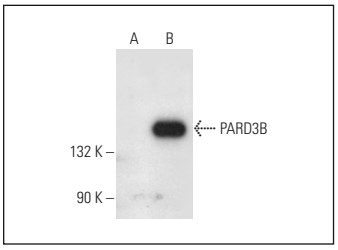
PARD3B (E-9) is recommended for detection of PARD3B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 PARD3B siRNA (h): sc-94928, PARD3B siRNA (m): sc-152024, PARD3B shRNA Plasmid (h): sc-94928-SH, PARD3B shRNA Plasmid (m): sc-152024-SH, PARD3B shRNA (h) Lentiviral Particles: sc-94928-V and PARD3B shRNA (m) Lentiviral Particles: sc-152024-V.

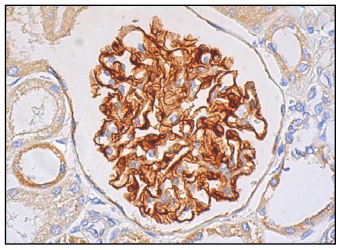
Molecular Weight of PARD3B: 133 kDa.

Positive Controls: PARD3B (m): 293T Lysate: sc-179294.

DATA



PARD3B (E-9): sc-398761. Western blot analysis of PARD3B expression in non-transfected: sc-117752 (**A**) and mouse PARD3B transfected: sc-179294 (**B**) 293T whole cell lysates.



PARD3B (E-9): sc-398761. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in glomeruli.

SELECT PRODUCT CITATIONS

1. Koehler, S., et al. 2016. Par3A is dispensable for the function of the glomerular filtration barrier of the kidney. Am. J. Physiol. Renal Physiol. 311: F112-F119.
2. Wang, L.T., et al. 2021. A proximity proteomics screen in three-dimensional spheroid cultures identifies novel regulators of lumen formation. Sci. Rep. 11: 22807.

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 for detailed protocols and support products.