SANTA CRUZ BIOTECHNOLOGY, INC.

PAR4 (3G9H7): sc-130078

BACKGROUND

Normal tissues are characterized by a balance between cellular stasis, cell proliferation, cell differentiation and cell death. Aberrant regulation of any of these cell processes can result in cancer. Cell death during embryogenesis, tissue atrophy and normal tissue turnover is called apoptosis and is characterized by cytoplasmic and nuclear condensation, nuclear disorganization and fragmentation of genomic DNA into 180-200 base pair oligomers. Five Ionomycin-inducible complementary cDNAs, designated PAR1, 2, 3, 4 and 5, have been isolated from the prostate cancer cell line AT-3. Nucleotide sequencing identified PAR1 as the rat homolog of MKP-1, PAR2 as the injury-inducible gene HB-EGF and PAR3 as the serum-induced gene CYR61. PAR4 and PAR5 sequences were not found to correspond to any previously described proteins. PAR4 (prostate apoptosis response 4) is specifically expressed by cells entering apoptosis and is not induced during growth factor stimulation, oxidative stress, necrosis or growth arrest. The PAR4 gene encodes a protein with a putative nuclear localization signal and carboxy-terminal leucine zipper.

CHROMOSOMAL LOCATION

Genetic locus: PAWR (human) mapping to 12q21.2; Pawr (mouse) mapping to 10 D1.

SOURCE

PAR4 (3G9H7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-330 of PAR4 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.

STORAGE

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

APPLICATIONS

PAR4 (3G9H7) is recommended for detection of PAR4 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).

Suitable for use as control antibody for PAR4 siRNA (h): sc-36190, PAR4 siRNA (m): sc-36189, PAR4 shRNA Plasmid (h): sc-36190-SH, PAR4 shRNA Plasmid (m): sc-36189-SH, PAR4 shRNA (h) Lentiviral Particles: sc-36190-V and PAR4 shRNA (m) Lentiviral Particles: sc-36189-V.

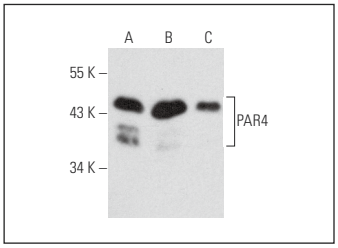
Molecular Weight of PAR4: 47 kDa.

Positive Controls: PAR4 (m): 293 Lysate: sc-179292, NIH/3T3 whole cell lysate: sc-2210 or LNCaP cell lysate: sc-2231.

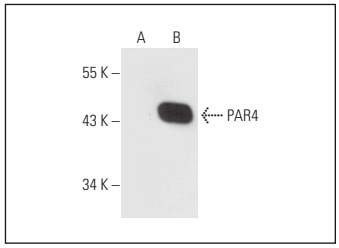
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PAR4 (3G9H7): sc-130078. Western blot analysis of PAR4 expression in LNCaP (**A**), SK-BR-3 (**B**) and NIH/3T3 (**C**) whole cell lysates.



PAR4 (3G9H7): sc-130078. Western blot analysis of PAR4 expression in non-transfected: sc-110760 (**A**) and mouse PAR4 transfected: sc-179292 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cohen, M., et al. 2013. Role of prostate apoptosis response 4 in translocation of GRP78 from the endoplasmic reticulum to the cell surface of trophoblastic cells. PLoS ONE 8: e80231.
2. Hagiwara, K., et al. 2014. Molecular and cellular features of murine craniofacial and trunk neural crest cells as stem cell-like cells. PLoS ONE 9: e84072.
3. Meynier, S., et al. 2015. Role of PAR-4 in ovarian cancer. Oncotarget 6: 22641-22652.
4. Zhang, H., et al. 2018. PAR4 overexpression promotes colorectal cancer cell proliferation and migration. Oncol. Lett. 16: 5745-5752.

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.

CONJUGATES

See **PAR4 (A-10): sc-1666** for PAR4 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.