

PAR4 (m): 293 Lysate: sc-179292

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.

REFERENCES

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- Fioretti, B., et al. 2004. Histamine activates a background, arachidonic acid-sensitive K channel in embryonic chick dorsal root ganglion neurons. *Neuroscience* 125: 119-127.
- Wang, G., et al. 2005. Direct binding to ceramide activates protein kinase C ζ before the formation of a pro-apoptotic complex with PAR4 in differentiating stem cells. *J Biol. Chem.* 280: 26415-26424.
- Park, S.K., et al. 2005. Par-4 links dopamine signaling and depression. *Cell* 122: 275-287.
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- Welters, H., et al. 2006. Conditional expression of hepatocyte nuclear factor-1 β , the maturity-onset diabetes of the young-5 gene product, influences the viability and functional competence of pancreatic β -cells. *J. Endocrinol.* 190: 171-181.
- Zapata-Benavides, P., et al. 2009. Expression of prostate apoptosis response (Par-4) is associated with progesterone receptor in breast cancer. *Arch. Med. Res.* 40: 595-599.
- Wang, B.D., et al. 2010. Prostate apoptosis response protein 4 sensitizes human colon cancer cells to chemotherapeutic 5-FU through mediation of an NF κ B and microRNA network. *Mol. Cancer* 9: 98.
- Felten, A., et al. 2013. Zipper-interacting protein kinase is involved in regulation of ubiquitination of the androgen receptor, thereby contributing to dynamic transcription complex assembly. *Oncogene* 32: 4981-4988.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: Pawr (mouse) mapping to 10 D1.

PRODUCT

PAR4 (m): 293 Lysate represents a lysate of mouse PAR4 transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

PAR4 (m): 293 Lysate is suitable as a Western Blotting positive control for mouse reactive PAR4 antibodies. Recommended use: 10-20 μ l per lane.

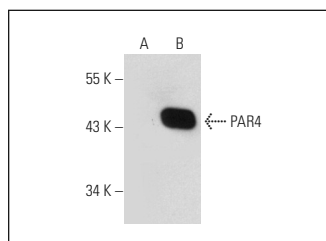
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

PAR4 (3G9H7): sc-130078 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PAR4 expression in PAR4 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



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.

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.