

PAR-4 Antibody

✓ 100 µl
(10 western blots)

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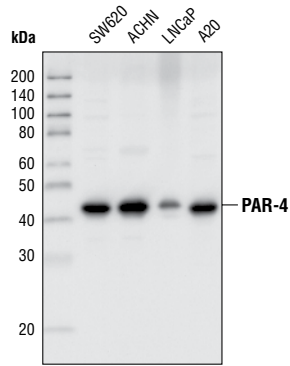
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #5074
Swiss-Prot Acc. #Q96IZ0

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IF-IC, F Endogenous	H, M, R, Mk	41 kDa	Rabbit**

Background: PAR-4 (prostate apoptosis response-4) was identified as a protein that is upregulated in prostate tumor cells undergoing apoptosis (1). Additionally, in parallel studies PAR-4 was found in the yeast two-hybrid system to bind to the Wilms' tumor suppressor protein WT1 and may modulate WT1-mediated transcriptional activation (2). PAR-4 contains a leucine zipper domain and a death domain and has been implicated as an effector of apoptosis during tumorigenesis as well as in neurodegenerative disorders (3,4). PAR-4 is widely expressed in normal tissues but can be downregulated in some tumor types. The mechanism of PAR-4 mediated apoptosis regulation appears to be complex and dependent on the cellular context. Studies have indicated roles for PAR-4 in activation of the Fas-FADD-caspase-8 pathway as well as inhibition of the NF-κB pro-survival pathway (5-7). Its activity is likely to depend on the cellular context and post-translational modifications. For instance, phosphorylation of PAR-4 by Akt prevents its nuclear translocation thereby promoting cell survival (8). In contrast, phosphorylation of PAR-4 at T155 by PKA appears to positively regulate its apoptotic activity (9).

Specificity/Sensitivity: PAR-4 Antibody detects endogenous levels of PAR-4 protein.



Western blot analysis of extracts from SW620, ACHN, LNCaP and A20 cell lines, using PAR-4 Antibody.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly210 of human PAR-4. Antibodies were purified by protein A and peptide affinity chromatography.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

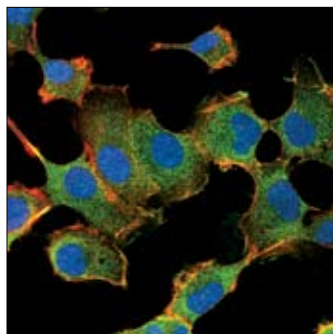
Western blotting	1:1000
Immunoprecipitation	1:100
Immunocytochemistry (IF-IC)	1:100
Flow Cytometry	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

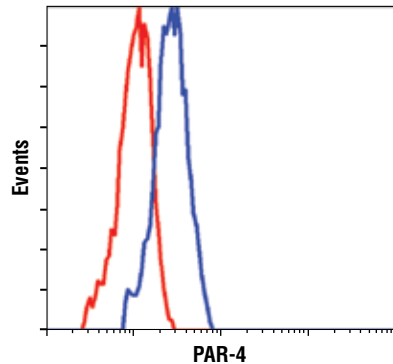
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Sells, S.F. et al. (1997) *Mol. Cell Biol.* 17, 3823-3832.
- (2) Johnstone, R.W. et al. (1996) *Mol. Cell Biol.* 16, 6945-6956.
- (3) Guo, Q. et al. (1998) *Nat. Med.* 4, 957-962.
- (4) El-Guendy, N. and Rangnekar, V.M. (2003) *Exp. Cell Res.* 283, 51-66.
- (5) Chakraborty, M. et al. (2001) *Cancer Res.* 61, 7255-7263.
- (6) Díaz-Meco, M.T. et al. (1996) *Cell* 86, 777-786.
- (7) Díaz-Meco, M.T. et al. (1999) *J. Biol. Chem.* 274, 19606-79612.
- (8) Goswami, A. et al. (2005) *Mol. Cell* 20, 33-44.
- (9) Gurumurthy, S. et al. (2005) *Mol. Cell Biol.* 25, 1146-1161.



Confocal immunofluorescent analysis of HT-1080 cells using PAR-4 Antibody (green). Actin filaments were labeled with DY-554 phalloidin (red). Blue pseudocolor = DRAQ5 (fluorescent DNA dye).



Flow cytometric analysis of HeLa cells, using PAR-4 Antibody (blue) compared to a nonspecific negative control antibody (red).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.