

#2329 Store at -20°C

Phospho-PAR-4 (Thr163) Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	43	Rabbit	#Q96IZ0	5074

Product Usage Information	Application Western Blotting	Dilution 1:1000
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.	
Specificity / Sensitivity	Phospho-PAR-4 (Thr163) Antibody detects endogenous levels of PAR-4 when phosphorylated at Thr163 (Thr163 corresponds to human sequence and is equivalent to Thr155 in rat and Thr156 in mouse).	
Species predicted to react based on 100% sequence homology	Mouse, Rat, Monkey	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr163 of human PAR-4 (Thr155 in rat and Thr156 in mouse). Antibodies were purified by protein A and peptide affinity chromatography.	
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 rat PAR-4 at T155 by PKA appears to positively regulate its apoptotic activity (9).	
Background References	<ol style="list-style-type: none"> 1. Sells, S.F. et al. (1997) <i>Mol. Cell Biol.</i> 17, 3823-3832. 2. Johnstone, R.W. et al. (1996) <i>Mol. Cell Biol.</i> 16, 6945-6956. 3. Guo, Q. et al. (1998) <i>Nat. Med.</i> 4, 957-962. 4. El-Guendy, N. and Rangnekar, V.M. (2003) <i>Exp. Cell Res.</i> 283, 51-66. 5. Chakraborty, M. et al. (2001) <i>Cancer Res.</i> 61, 7255-7263. 6. Díaz-Meco, M.T. et al. (1996) <i>Cell</i> 86, 777-786. 7. Diaz-Meco, M.T. et al. (1999) <i>J. Biol. Chem.</i> 274, 19606-79612. 8. Goswami, A. et al. (2005) <i>Mol. Cell</i> 20, 33-44. 9. Gurumurthy, S. et al. (2005) <i>Mol. Cell Biol.</i> 25, 1146-1161. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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