

#8499 Store at -20C

Prdx1 (D5G12) Rabbit mAb



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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	21	Rabbit IgG	#Q06830	5052

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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Prdx1 (D5G12) Rabbit mAb recognizes endogenous levels of total Prdx1 protein. This antibody does not cross-react with Prdx2 protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg110 of human Prdx1 protein.	
Background	Prdx1 belongs to a family of non-seleno peroxidases that function as H ₂ O ₂ scavengers. All 6 Prdx isoforms share a conserved N-terminal cysteine (Cys51) that is oxidized by H ₂ O ₂ to form cysteine-sulfenic acid (Cys51-SOH) and, in turn, reacts with Cys172-SH of another Prdx protein, forming a disulfide dimer and protecting it from degradation (1-3). Abnormally high levels of H ₂ O ₂ cause Prdx1 to form an oligomeric chaperone that loses its peroxidase activity (4). Prdx family members have been reported to bind to JNK and c-Abl and regulate their kinase activity (5,6). Prdx1 was shown to bind to PTEN and regulate its phosphatase activity in conditions of mild or no cellular stress, hence preventing Akt-driven transformation by protecting PTEN from oxidation-induced inactivation (7).	
Background References	<ol style="list-style-type: none"> 1. Wood, Z.A. et al. (2003) <i>Trends Biochem Sci</i> 28, 32-40. 2. Chae, H.Z. et al. (1994) <i>J Biol Chem</i> 269, 27670-8. 3. Chae, H.Z. et al. (1994) <i>Proc Natl Acad Sci U S A</i> 91, 7022-6. 4. Jang, H.H. et al. (2004) <i>Cell</i> 117, 625-35. 5. Wen, S.T. and Van Etten, R.A. (1997) <i>Genes Dev</i> 11, 2456-67. 6. Kim, Y.J. et al. (2006) <i>Cancer Res</i> 66, 7136-42. 7. Cao, J. et al. (2009) <i>EMBO J</i> 28, 1505-17. 	

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 BSA, 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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