

#4841 Store at -20°C

Cox1 Antibody



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

Applications: WB, FC-FP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 65, 70	Source: Rabbit	UniProt ID: #P23219	Entrez-Gene Id: 5742
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Product Usage Information	Application Western Blotting Flow Cytometry (Fixed/Permeabilized)	Dilution 1:1000 1:100
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	Cox1 Antibody Antibody detects endogenous levels of total Cox1 protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the C-terminus of mouse Cox1. Antibodies are purified by peptide affinity chromatography.	
Background	Cyclooxygenase1 (Cox1) and cyclooxygenase2 (Cox2), family members with 60% homology in humans, catalyze prostaglandin production from arachidonic acid (1,2). While Cox1 expression is constitutive in most tissues, Cox2 expression is induced by lipopolysaccharide (LPS) and peptidoglycan (PGN) (3). PGN activates Ras, leading to phosphorylation of Raf at Ser338 and Erk1/2 at Tyr204. The activation of MAP kinase signaling results in subsequent activation of IKKα/β, phosphorylation of IκBα at Ser32/36, and NF-κB activation. Finally, activation of the transcription factor NF-κB is responsible for the induction of Cox2 expression (4). Investigators have shown that LPS and PGN induce the clinical manifestations of arthritis and bacterial infections, such as inflammation, fever, and septic shock (5). Research studies have indicated that Cox1 and Cox2 may also play a role in the neuropathology of Alzheimer's disease by potentiating γ-secretase activity and β-amyloid generation (6).	
Background References	1. Xie, W.L. et al. (1991) <i>Proc Natl Acad Sci USA</i> 88, 2692-6. 2. Vane, J.R. et al. (1998) <i>Annu Rev Pharmacol Toxicol</i> 38, 97-120. 3. O'Neill, G.P. et al. (1994) <i>Mol Pharmacol</i> 45, 245-54. 4. Chen, B.C. et al. (2004) <i>J Biol Chem</i> 279, 20889-97. 5. Wang, Q. et al. (2001) <i>Infect Immun</i> 69, 2270-6. 6. Qin, W. et al. (2003) <i>J Biol Chem</i> 278, 50970-7.	

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 FC-FP: Flow Cytometry (Fixed/Permeabilized)
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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