

#9896 Store at -20°C

## Cox1 (D2G6) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M	Endogenous	70	Rabbit IgG	#P23219	5742

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### 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

Cox1 (D2G6) Rabbit mAb recognizes endogenous levels of glycosylated Cox1 protein; it also weakly recognizes unglycosylated Cox1 protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ile123 of human Cox1 protein.

### 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) *Proc Natl Acad Sci USA* 88, 2692-6.
2. Vane, J.R. et al. (1998) *Annu Rev Pharmacol Toxicol* 38, 97-120.
3. O'Neill, G.P. et al. (1994) *Mol Pharmacol* 45, 245-54.
4. Chen, B.C. et al. (2004) *J Biol Chem* 279, 20889-97.
5. Wang, Q. et al. (2001) *Infect Immun* 69, 2270-6.
6. Qin, W. et al. (2003) *J Biol Chem* 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 **IP:** Immunoprecipitation

### 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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