

**Cox-1 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV10264****Specification**

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**Cox-1 Antibody - Product Information**

Application	WB, IHC, IP
Primary Accession	<a href="#">P22437</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	69042

**Cox-1 Antibody - Additional Information****Gene ID** 19224

Positive Control	<b>IHC: Brain, Cortex</b>
Application & Usage	<b>Western blotting (1-4 µg/ml), immunoprecipitation, and Immunohistochemistry(5 µg/ml). However, the optimal concentrations should be determined individually. The antibody recognizes 70 kDa COX-1 of human, mouse and rat origins. It does not cross-react with COX-2.</b>

**Other Names**

Cyclooxygenase 1, PTGS1, PCOX1, COX-1, PGG/HS, PGHS1 , PGHS-1, PHS1 , COX1, PTGHS

**Target/Specificity**

Cox-1

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.2 mg/ml) immunoaffinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 50% glycerol, 1% BSA, and 0.02% sodium azide.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions**

**Precautions**

Cox-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Cox-1 Antibody - Protein Information**

**Name** Ptgs1 {ECO:0000312|MGI:MGI:97797}

**Synonyms** Cox-1, Cox1

**Function**

Dual cyclooxygenase and peroxidase that plays an important role in the biosynthesis pathway of prostanoids, a class of C20 oxylipins mainly derived from arachidonate ((5Z,8Z,11Z,14Z)-eicosatetraenoate, AA, C20:4(n-6)), with a particular role in the inflammatory response. The cyclooxygenase activity oxygenates AA to the hydroperoxy endoperoxide prostaglandin G2 (PGG2), and the peroxidase activity reduces PGG2 to the hydroxy endoperoxide prostaglandin H2 (PGH2), the precursor of all 2-series prostaglandins and thromboxanes. This complex transformation is initiated by abstraction of hydrogen at carbon 13 (with S-stereochemistry), followed by insertion of molecular O2 to form the endoperoxide bridge between carbon 9 and 11 that defines prostaglandins. The insertion of a second molecule of O2 (bis-oxygenase activity) yields a hydroperoxy group in PGG2 that is then reduced to PGH2 by two electrons. Involved in the constitutive production of prostanoids in particular in the stomach and platelets. In gastric epithelial cells, it is a key step in the generation of prostaglandins, such as prostaglandin E2 (PGE2), which plays an important role in cytoprotection. In platelets, it is involved in the generation of thromboxane A2 (TXA2), which promotes platelet activation and aggregation, vasoconstriction and proliferation of vascular smooth muscle cells. Can also use linoleate (LA, (9Z,12Z)-octadecadienoate, C18:2(n-6)) as substrate and produce hydroxyoctadecadienoates (HODEs) in a regio- and stereospecific manner, being (9R)-HODE ((9R)-hydroxy-(10E,12Z)-octadecadienoate) and (13S)-HODE ((13S)-hydroxy-(9Z,11E)- octadecadienoate) its major products.

**Cellular Location**

Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein

**Cox-1 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Cox-1 Antibody - Images****Cox-1 Antibody - Background**

COX proteins are membrane-associated heme proteins that have cyclooxygenase and peroxidase

activities. These enzymes are targets of NSAID (Nonsteroidal anti-inflammatory drugs) such as aspirin. Prostaglandins (PGs) formed by the enzymatic activity of COX-1 are primarily involved in the regulation of homeostatic functions throughout the body, whereas PGs formed by COX-2 primarily mediate pain, fever, and inflammation. COX-1 is constitutively expressed, with particularly high expression in gastrointestinal tissues. COX-2 is induced by cytokines and mitogens and is likely to play a role in inflammatory diseases such as rheumatoid arthritis.