

Cox-3 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10520**Specification**

Cox-3 Antibody - Product Information

Application	WB
Primary Accession	P22437
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	69042

Cox-3 Antibody - Additional Information**Gene ID** 19224**Application & Usage****Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually.****Other Names**

PTGS1 , PCOX1 , COX-3 , COX3 , PGHS1 , PGHS-1 , PHS1 , PTGHS

Target/Specificity

Cox-3

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

Cox-3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Cox-3 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-3 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-3 Antibody - Images

Cox-3 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. In rodents and humans, COX-3 encodes proteins with completely different amino acid sequences than COX-1 or COX-2 and without

COX activity. It has been suggested COX-3 as the key to unlocking the mystery of the mechanism of action of acetaminophen.