10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-COX1/Cyclooxygenase 1 Picoband Antibody

**Catalog # ABO11727**

## Specification

### Anti-COX1/Cyclooxygenase 1 Picoband Antibody - Product Information

| | |
|---|---|
| Application | **IHC** |
| Primary Accession | P23219 |
| Host | **Rabbit** |
| Reactivity | **Human, Rat** |
| Clonality | **Polyclonal** |
| Format | **Lyophilized** |

**Description**
Rabbit IgG polyclonal antibody for Prostaglandin G/H synthase 1(PTGS1) detection. Tested with WB, IHC-P in Human;Rat.

**Reconstitution**
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

### Anti-COX1/Cyclooxygenase 1 Picoband Antibody - Additional Information

**Gene ID** 5742

**Other Names**
Prostaglandin G/H synthase 1, 1.14.99.1, Cyclooxygenase-1, COX-1, Prostaglandin H2 synthase 1, PGH synthase 1, PGHS-1, PHS 1, Prostaglandin-endoperoxide synthase 1, PTGS1, COX1

**Calculated MW**
68686 MW KDa

**Application Details**
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat<br><br>Western blot, 0.1-0.5 µg/ml, Human, Rat<br>

**Subcellular Localization**
Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein.

**Protein Name**
Prostaglandin G/H synthase 1

**Contents**
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**
E.coli-derived human COX1 recombinant protein (Position: E318-L599). Human COX1 shares 90% and 89% amino acid (aa) sequences identity with mouse and rat COX1, respectively.

**Purification**
Immunogen affinity purified.

**Cross Reactivity**
No cross reactivity with other proteins

Storage

**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

**Sequence Similarities**
Belongs to the prostaglandin G/H synthase family.

## Anti-COX1/Cyclooxygenase 1 Picoband Antibody - Protein Information

**Name** PTGS1 (HGNC:9604)

**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 (PubMed:<a href="http://www.uniprot.org/citations/7947975" target="_blank">7947975</a>). 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 (Probable). 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 (By similarity).

**Cellular Location**
Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein

## Anti-COX1/Cyclooxygenase 1 Picoband 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 Cytomety
- Cell Culture

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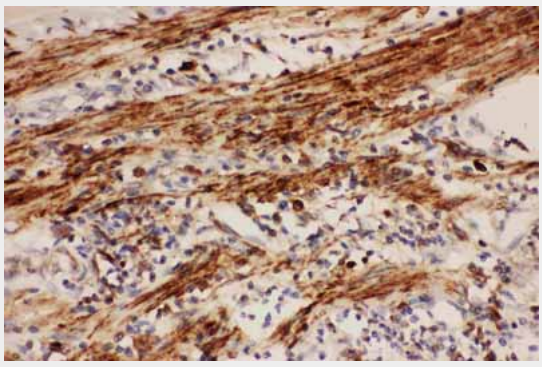
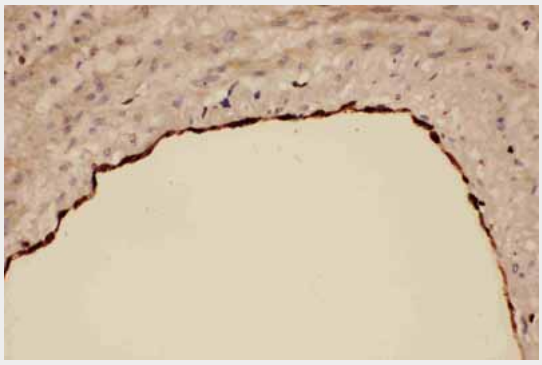
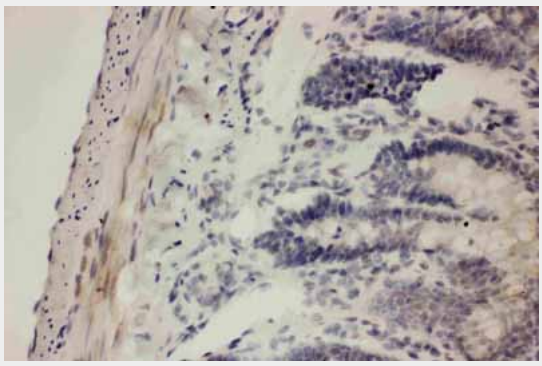
## Anti-COX1/Cyclooxygenase 1 Picoband Antibody - Images



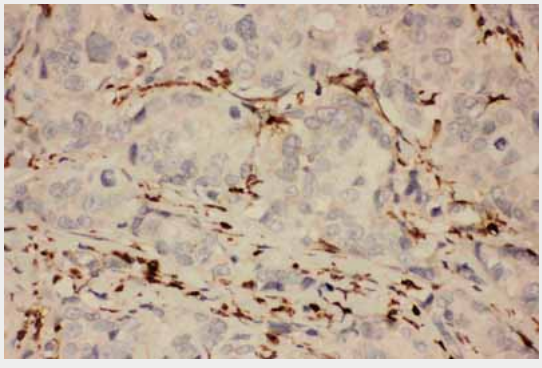
Anti-COX1 Picoband antibody, ABO11727-1.JPGIHC(P): Human Intestinal Cancer Tissue



Anti-COX1 Picoband antibody, ABO11727-2.JPGIHC(P): Human Lung Cancer Tissue



Anti-COX1 Picoband antibody, ABO11727-3.JPGIHC(P): Rat Intestine Tissue



Anti-COX1 Picoband antibody, ABO11727-4.JPGIHC(P): Human Mammary Cancer Tissue

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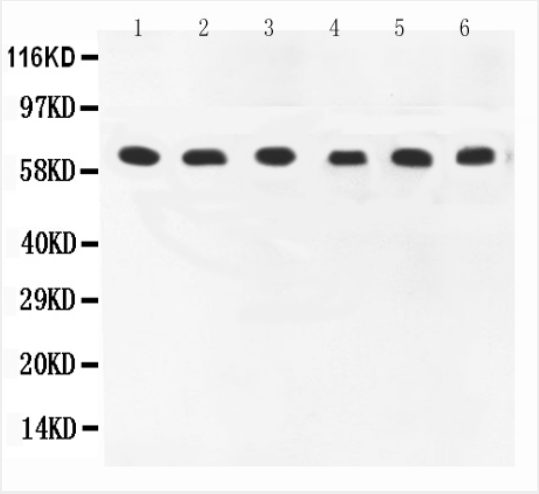


Anti-COX1 Picoband antibody, ABO11727-5.jpgAll lanes: Anti-COX1(ABO11727) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 40ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: JURKAT Whole Cell Lysate at 40ugLane 4: K562 Whole Cell Lysate at 40ugLane 5: MCF-7 Whole Cell Lysate at 40ugLane 6: A549 Whole Cell Lysate at 40ugPredicted bind size: 69KDObserved bind size: 69KD

**Anti-COX1/Cyclooxygenase 1 Picoband Antibody - Background**

Cyclooxygenase 1(COX1), also known as Prostaglandin-endoperoxide synthase (PTGS1) or mitochondrial cytochrome c oxidase subunit 1, is the key enzyme in prostaglandin biosynthesis. The gene was approximately 40 kb long, with 11 protein-coding exons. There were 599 amino acid residues with a calculated molecular mass of approximately 68 kD. By analysis of a human/hamster somatic hybrid DNA panel, it was demonstrated that the PTGS1 gene maps to chromosome 9. Human prostaglandin endoperoxide synthase exhibited 91% amino acid identity with the sheep enzyme. Prostaglandin synthase 1 gene disruption in mice reduces arachidonic acid-induced inflammation and indomethacin-induced gastric ulceration.