

Anti-COX1/Cyclooxygenase 1 Picoband Antibody

Catalog # ABO11727

Product Information

Application	WB, IHC-P
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.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat Western blot, 0.1-0.5 µg/ml, Human, Rat
Subcellular Localization	Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein.
Source	Eukaryota
Protein Name	Prostaglandin G/H synthase 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Na ₃ N.
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.

Protein Information

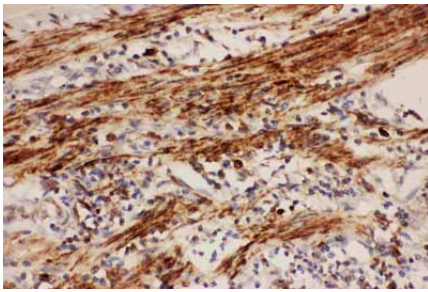
Name	PTGS1 (HGNC:9604)
Function	Dual cyclooxygenase and peroxidase that plays an important role in the biosynthesis pathway of prostanoids, a class of C20 oxylipins mainly derived from arachidonate ((5Z,8Z,11Z,14Z)- eicosatetraenoate, AA, C20:4(n-6)), with a particular role in the inflammatory response. 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: 7947975). 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

Background

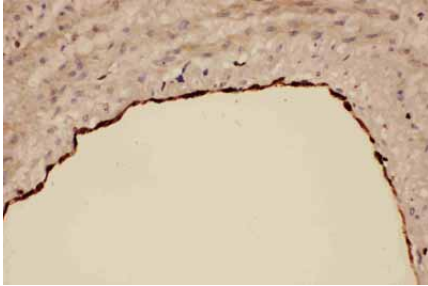
Cyclooxygenase 1(COX1), also known as Prostaglandin-endoperoxide synthase (PTGS1) or mitochondrial cytochrome c oxidase subunit 1, is the key enzyme in prostaglandin biosynthesis. The gene was approximately 40 kb long, with 11 protein-coding exons. There were 599 amino acid residues with a calculated 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.

Images

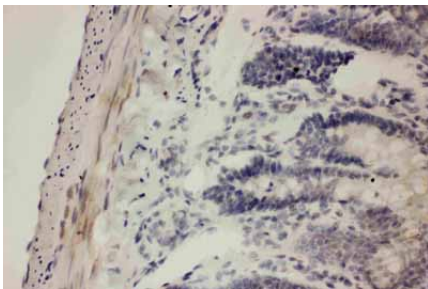
Anti-COX1 Picoband antibody, ABO11727-1.JPGIHC(P):
Human Intestinal Cancer Tissue



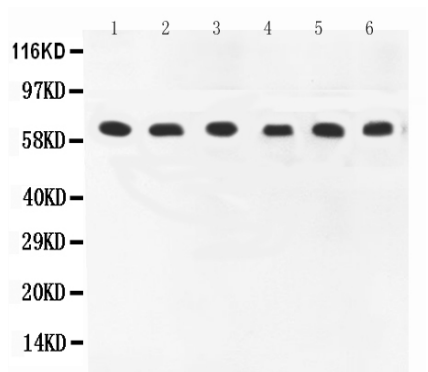
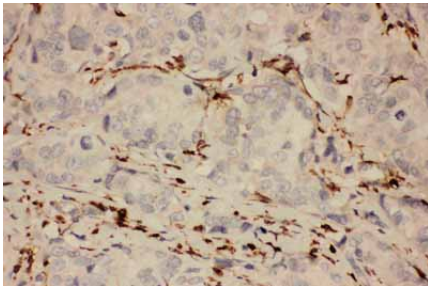
Anti-COX1 Picoband antibody, ABO11727-2.JPGIHC(P):
Human Lung Cancer Tissue



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



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



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

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