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Goat Anti-COX1 / PTGS1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1270a

Specification

Goat Anti-COX1 / PTGS1 Antibody - Product Information

Application	**WB, IHC, Pep-ELISA**
Primary Accession	P23219
Other Accession	NP_542158, 5742
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**68686**

Goat Anti-COX1 / PTGS1 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

Dilution
WB~~1:1000
IHC~~1:100~500
Pep-ELISA~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-COX1 / PTGS1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-COX1 / PTGS1 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: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

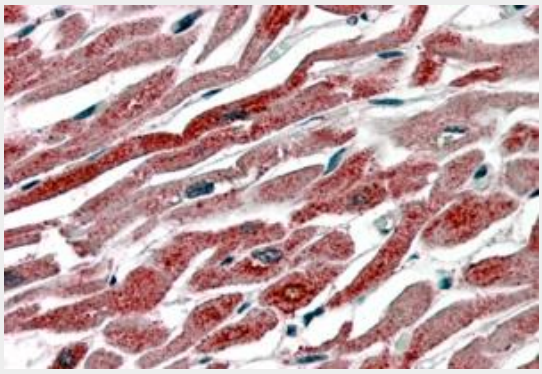
Goat Anti-COX1 / PTGS1 Antibody - Protocols

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

Goat Anti-COX1 / PTGS1 Antibody - Images

AF1270a staining (1 µg/ml) of HeLa lysate (RIPA buffer, 30 µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.



AF1270a (3.8 µg/ml) staining of paraffin embedded Human Heart. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Goat Anti-COX1 / PTGS1 Antibody - Background

Prostaglandin-endoperoxide synthase (PTGS), also known as cyclooxygenase, is the key enzyme in prostaglandin biosynthesis, and acts both as a dioxygenase and as a peroxidase. There are two isozymes of PTGS: a constitutive PTGS1 and an inducible PTGS2, which differ in their regulation of expression and tissue distribution. This gene encodes PTGS1, which regulates angiogenesis in endothelial cells, and is inhibited by nonsteroidal anti-inflammatory drugs such as aspirin. PTGS1 is thought to be involved in cell-cell signaling and maintaining tissue homeostasis. Alternative splicing of this gene generates two transcript variants. The expression of these two transcripts is differentially regulated by relevant cytokines and growth factors.

Goat Anti-COX1 / PTGS1 Antibody - References

Prostaglandin-endoperoxide synthase genes COX1 and COX2 - novel modifiers of disease severity in cystic fibrosis patients. Czerska K, et al. J Appl Genet, 2010. PMID 20720307.
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serous ovarian cancer and TERT, a cancer susceptibility hot-spot. Johnatty SE, et al. PLoS Genet, 2010 Jul 8. PMID 20628624.
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