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COX2 antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AD80529

Specification

COX2 antibody - Product info

Application	**IHC**
Primary Accession	P35354
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**68996 Da**

COX2 antibody - Additional info

Gene ID **5743**

Other Names
Prostaglandin G/H synthase 2, 1.14.99.1, Cyclooxygenase-2, COX-2, PHS II, Prostaglandin H2 synthase 2, PGH synthase 2, PGHS-2, Prostaglandin-endoperoxide synthase 2, PTGS2 (HGNC:9605)

Dilution
IHC~~1:100~500

Storage
Maintain refrigerated at 2-8°C

Precautions **COX2 antibody is for research use only and not for use in diagnostic or therapeutic procedures.**

COX2 antibody - Protein Information

Name PTGS2 (HGNC:9605)

Function **Dual cyclooxygenase and peroxidase in the biosynthesis pathway of prostanoids, a class of C20 oxylipins mainly derived from arachidonate, with a particular role in the inflammatory response (PubMed:7947975, PubMed:7592599, PubMed:9261177, PubMed:16373578, PubMed:22942274, PubMed:26859324, PubMed:27226593, PubMed:11939906, PubMed:19540099). The cyclooxygenase activity oxygenates arachidonate (AA, C20:4(n-6)) to the hydroperoxy endoperoxide prostaglandin G2 (PGG2), and the peroxidase activity**

reduces PGG2 to the hydroxy endoperoxide PGH2, the precursor of all 2-series prostaglandins and thromboxanes (PubMed:7947975, PubMed:7592599, PubMed:9261177, PubMed:16373578, PubMed:22942274, PubMed:26859324, PubMed:27226593). 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, PubMed:7592599, PubMed:9261177, PubMed:16373578, PubMed:22942274, PubMed:26859324, PubMed:27226593). Similarly catalyzes successive cyclooxygenation and peroxidation of dihomo-gamma-linoleate (DGLA, C20:3(n-6)) and eicosapentaenoate (EPA, C20:5(n-3)) to corresponding PGH1 and PGH3, the precursors of 1- and 3- series prostaglandins (PubMed:11939906, PubMed:19540099). In an alternative pathway of prostanoid biosynthesis, converts 2-arachidonoyl lysophopholipids to prostanoid lysophopholipids, which are then hydrolyzed by intracellular phospholipases to release free prostanoids (PubMed:27642067). Metabolizes 2-arachidonoyl glycerol yielding the glyceryl ester of PGH2, a process that can contribute to pain response (PubMed:22942274). Generates lipid mediators from n-3 and n-6 polyunsaturated fatty acids (PUFAs) via a lipoxygenase-type mechanism. Oxygenates PUFAs to hydroperoxy compounds and then reduces them to corresponding alcohols (PubMed:11034610, PubMed:11192938, PubMed:9048568, PubMed:9261177). Plays a role in the generation of resolution phase interaction products (resolvins) during both sterile and infectious inflammation (PubMed:12391014). Metabolizes docosahexaenoate (DHA, C22:6(n-3)) to 17R-HDHA, a precursor of the D- series resolvins (RvDs) (PubMed:12391014). As a component of the biosynthetic pathway of E-series resolvins (RvEs), converts eicosapentaenoate (EPA, C20:5(n-3)) primarily to 18S-HEPE that is further

	metabolized by ALOX5 and LTA4H to generate 18S-RvE1 and 18S- RvE2 (PubMed:21206090). In vascular endothelial cells, converts docosapentaenoate (DPA, C22:5(n-3)) to 13R-HDPA, a precursor for 13- series resolvins (RvTs) shown to activate macrophage phagocytosis during bacterial infection (PubMed:26236990). In activated leukocytes, contributes to oxygenation of hydroxyeicosatetraenoates (HETE) to diHETES (5,15-diHETE and 5,11-diHETE) (PubMed:22068350, PubMed:26282205). During neuroinflammation, plays a role in neuronal secretion of specialized preresolving mediators (SPMs) 15R-lipoxin A4 that regulates phagocytic microglia (By similarity).
Cellular Location	**Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein. Nucleus inner membrane; Peripheral membrane protein. Nucleus outer membrane; Peripheral membrane protein. Note=Detected on the lumenal side of the endoplasmic reticulum and nuclear envelope**

COX2 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

COX2 antibody - Images