

## Anti-COX2 PTGS2 Rabbit Monoclonal Antibody Catalog # ABO13393

### Specification

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#### Anti-COX2 PTGS2 Rabbit Monoclonal Antibody - Product Information

Application	WB, IF, ICC
Primary Accession	<a href="#">P35354</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human, Mouse
Clonality	Monoclonal
Format	Liquid

#### Description

Anti-COX2 PTGS2 Rabbit Monoclonal Antibody . Tested in WB, ICC/IF applications. This antibody reacts with Human, Mouse.

#### Anti-COX2 PTGS2 Rabbit Monoclonal Antibody - Additional Information

**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](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=9605))

#### Calculated MW

68996 MW KDa

#### Application Details

WB 1:500-1:1000  
ICC/IF 1:50-1:200

#### Subcellular Localization

Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein.

#### Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### Immunogen

A synthesized peptide derived from human COX2

#### Purification

Affinity-chromatography

#### Storage

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated**

## freeze-thaw cycles.

### Anti-COX2 PTGS2 Rabbit Monoclonal 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 ((5Z,8Z,11Z,14Z)-eicosatetraenoate, AA, C20:4(n-6)), with a particular role in the inflammatory response (PubMed:<a href="http://www.uniprot.org/citations/11939906" target="\_blank">11939906</a>, PubMed:<a href="http://www.uniprot.org/citations/16373578" target="\_blank">16373578</a>, PubMed:<a href="http://www.uniprot.org/citations/19540099" target="\_blank">19540099</a>, PubMed:<a href="http://www.uniprot.org/citations/22942274" target="\_blank">22942274</a>, PubMed:<a href="http://www.uniprot.org/citations/26859324" target="\_blank">26859324</a>, PubMed:<a href="http://www.uniprot.org/citations/27226593" target="\_blank">27226593</a>, PubMed:<a href="http://www.uniprot.org/citations/7592599" target="\_blank">7592599</a>, PubMed:<a href="http://www.uniprot.org/citations/7947975" target="\_blank">7947975</a>, PubMed:<a href="http://www.uniprot.org/citations/9261177" target="\_blank">9261177</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/16373578" target="\_blank">16373578</a>, PubMed:<a href="http://www.uniprot.org/citations/22942274" target="\_blank">22942274</a>, PubMed:<a href="http://www.uniprot.org/citations/26859324" target="\_blank">26859324</a>, PubMed:<a href="http://www.uniprot.org/citations/27226593" target="\_blank">27226593</a>, PubMed:<a href="http://www.uniprot.org/citations/7592599" target="\_blank">7592599</a>, PubMed:<a href="http://www.uniprot.org/citations/7947975" target="\_blank">7947975</a>, PubMed:<a href="http://www.uniprot.org/citations/9261177" target="\_blank">9261177</a>). 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/16373578" target="\_blank">16373578</a>, PubMed:<a href="http://www.uniprot.org/citations/22942274" target="\_blank">22942274</a>, PubMed:<a href="http://www.uniprot.org/citations/26859324" target="\_blank">26859324</a>, PubMed:<a href="http://www.uniprot.org/citations/27226593" target="\_blank">27226593</a>, PubMed:<a href="http://www.uniprot.org/citations/7592599" target="\_blank">7592599</a>, PubMed:<a href="http://www.uniprot.org/citations/7947975" target="\_blank">7947975</a>, PubMed:<a href="http://www.uniprot.org/citations/9261177" target="\_blank">9261177</a>). 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:<a href="http://www.uniprot.org/citations/11939906" target="\_blank">11939906</a>, PubMed:<a href="http://www.uniprot.org/citations/19540099" target="\_blank">19540099</a>). In an alternative pathway of prostanoid biosynthesis, converts 2-arachidonoyl lysophospholipids to prostanoid lysophospholipids, which are then hydrolyzed by intracellular phospholipases to release free prostanoids (PubMed:<a href="http://www.uniprot.org/citations/27642067" target="\_blank">27642067</a>). Metabolizes 2-arachidonoyl glycerol yielding the glyceryl ester of PGH2, a process that can contribute to pain response (PubMed:<a href="http://www.uniprot.org/citations/22942274" target="\_blank">22942274</a>). 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:<a href="http://www.uniprot.org/citations/11034610" target="\_blank">11034610</a>, PubMed:<a href="http://www.uniprot.org/citations/11192938" target="\_blank">11192938</a>, PubMed:<a href="http://www.uniprot.org/citations/9048568" target="\_blank">9048568</a>

target="\_blank">9048568</a>, PubMed:<a href="http://www.uniprot.org/citations/9261177" target="\_blank">9261177</a>). Plays a role in the generation of resolution phase interaction products (resolvins) during both sterile and infectious inflammation (PubMed:<a href="http://www.uniprot.org/citations/12391014" target="\_blank">12391014</a>). Metabolizes docosahexaenoate (DHA, C22:6(n-3)) to 17R-HDHA, a precursor of the D-series resolvins (RvDs) (PubMed:<a href="http://www.uniprot.org/citations/12391014" target="\_blank">12391014</a>). 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:<a href="http://www.uniprot.org/citations/21206090" target="\_blank">21206090</a>). 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:<a href="http://www.uniprot.org/citations/26236990" target="\_blank">26236990</a>). In activated leukocytes, contributes to oxygenation of hydroxyeicosatetraenoates (HETE) to diHETES (5,15-diHETE and 5,11-diHETE) (PubMed:<a href="http://www.uniprot.org/citations/22068350" target="\_blank">22068350</a>, PubMed:<a href="http://www.uniprot.org/citations/26282205" target="\_blank">26282205</a>). 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). During neuroinflammation, plays a role in neuronal secretion of specialized preresolving mediators (SPMs) 15R-lipoxin A4 that regulates phagocytic microglia (By similarity).

#### Cellular Location

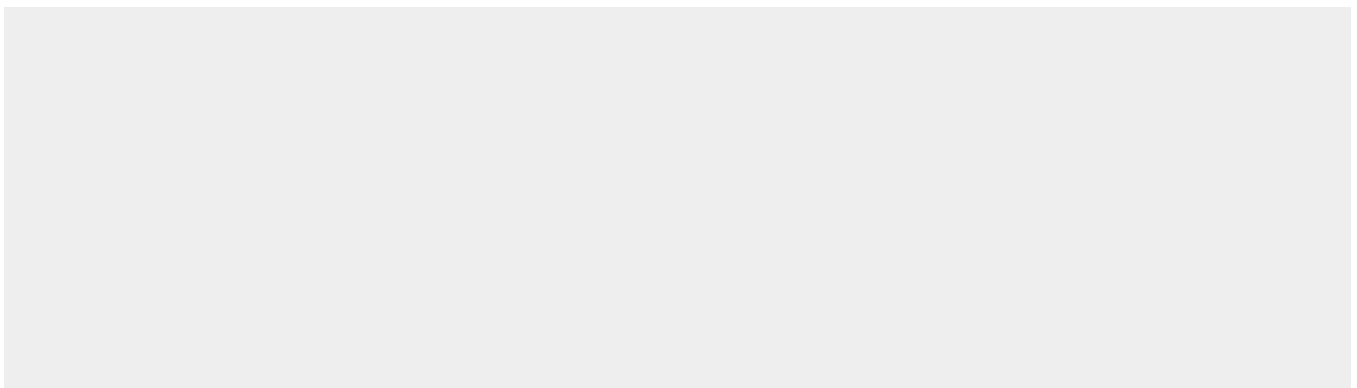
Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein. Nucleus inner membrane; Peripheral membrane protein. Nucleus outer membrane; Peripheral membrane protein. Note=Detected on the luminal side of the endoplasmic reticulum and nuclear envelope

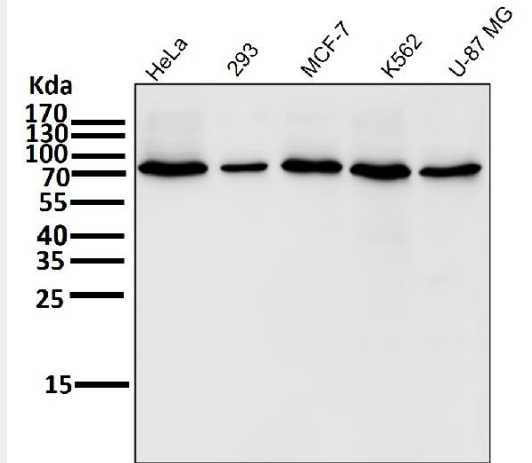
#### Anti-COX2 PTGS2 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

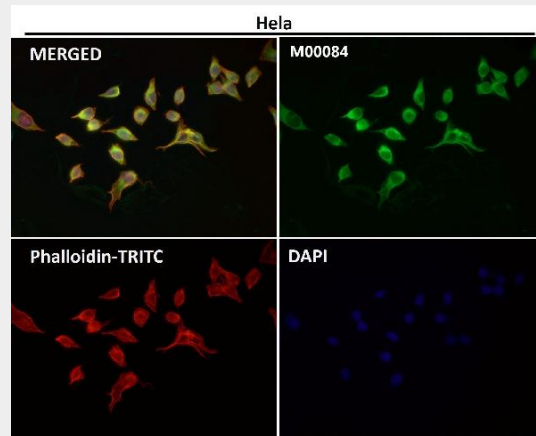
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Anti-COX2 PTGS2 Rabbit Monoclonal Antibody - Images

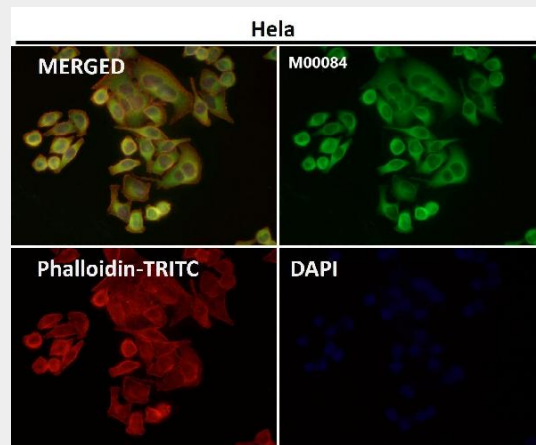




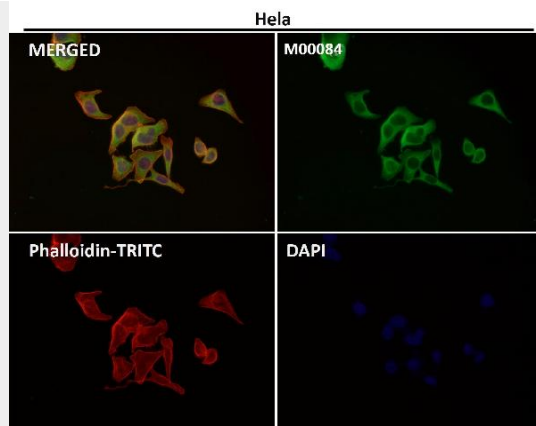
All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.



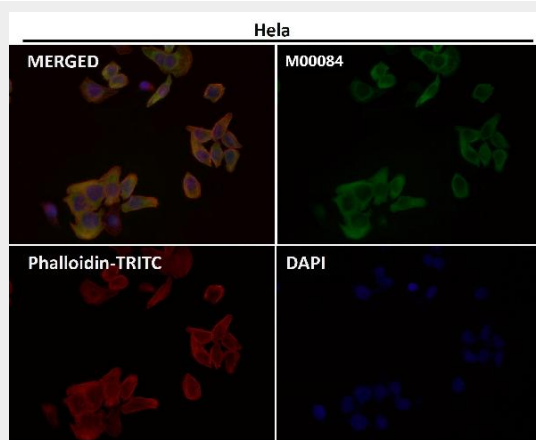
Immunofluorescent analysis using the Antibody at 1:50 dilution.



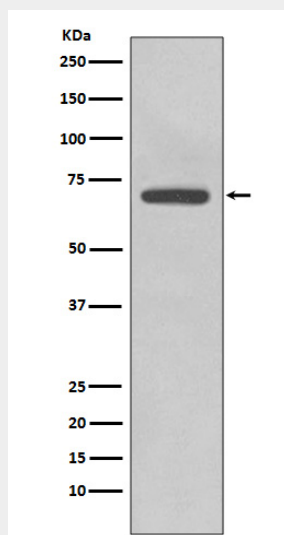
Immunofluorescent analysis using the Antibody at 1:50 dilution.



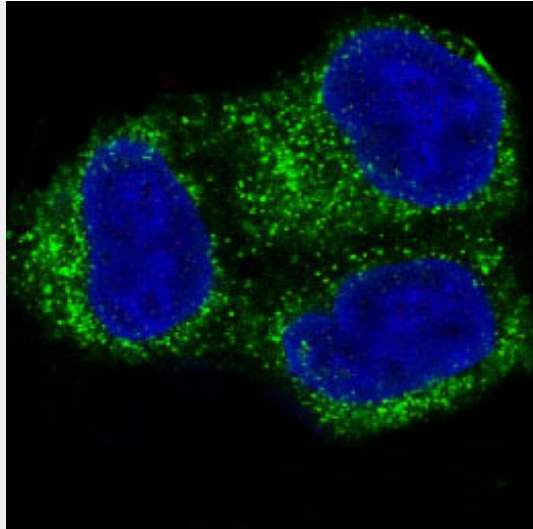
Immunofluorescent analysis using the Antibody at 1:150 dilution.



Immunofluorescent analysis using the Antibody at 1:500 dilution.



Western blot analysis of COX2 expression in RAW264.7 cell lysate treated with LPS.



Immunofluorescent analysis of HeLa cells, using COX2 Antibody.