

KD-Validated Anti-PTGS1 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI2239**Specification****KD-Validated Anti-PTGS1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	P23219
Reactivity	Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 69 kDa; observed, 69 kDa kDa
Gene Name	PTGS1
Aliases	PTGS1; Prostaglandin-Endoperoxide Synthase 1; PGHS-1; COX1; Cyclooxygenase-1; PTGHS; Prostaglandin-Endoperoxide Synthase 1 (Prostaglandin G/H Synthase And Cyclooxygenase); Prostaglandin G/H Synthase 1; Prostaglandin H2 Synthase 1; PGH Synthase 1; EC 1.14.99.1; EC 1.14.99; PGG/HS; PCOX1; PES-1; PGHS1; COX-1; PHS 1; COX3; PHS1
Immunogen	A synthesized peptide derived from human PTGS1

KD-Validated Anti-PTGS1 Rabbit Monoclonal 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 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=9604)

KD-Validated Anti-PTGS1 Rabbit Monoclonal 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

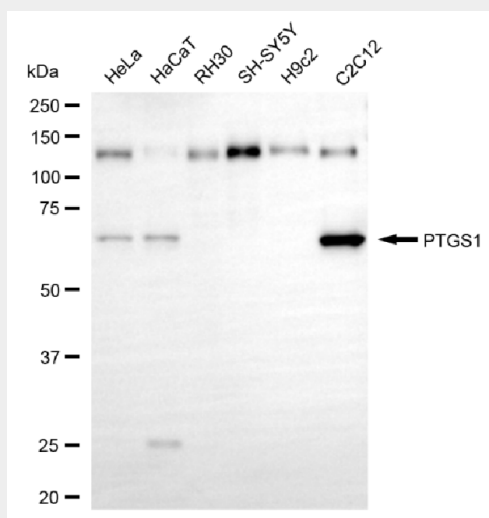
Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein

KD-Validated Anti-PTGS1 Rabbit Monoclonal Antibody - Protocols

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

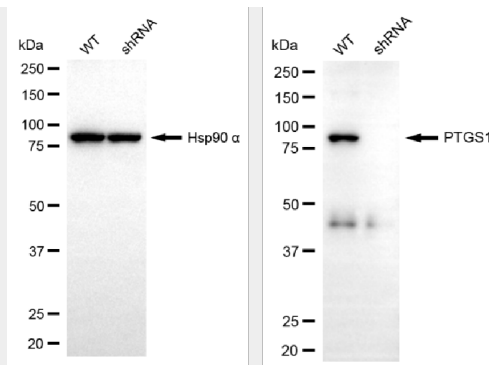
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-PTGS1 Rabbit Monoclonal Antibody - Images



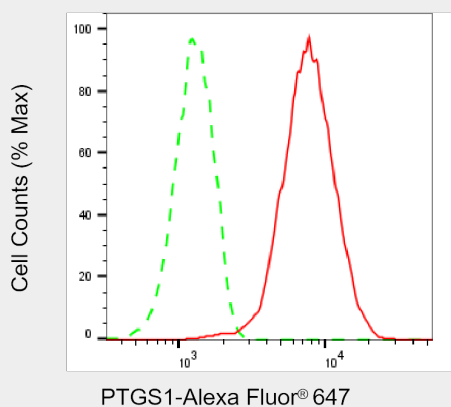
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Western blotting analysis using anti-PTGS1 antibody (Cat#AGI2239). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-PTGS1 antibody (Cat#AGI2239, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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Western blotting analysis using anti-PTGS1 antibody (Cat#AGI2239). PTGS1 expression in wild-type (WT) and PTGS1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-PTGS1 antibody (Cat#AGI2239, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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Flow cytometric analysis of PTGS1 expression in C2C12 cells using anti-PTGS1 antibody (Cat#AGI2239, 1:2,000). Green, isotype control; red, PTGS1.