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Cox1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50673

Product Information

Application	WB, IHC
Primary Accession	P23219
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Calculated MW	68686

Additional Information

Gene ID	5742
Other Names	Prostaglandin G/H synthase 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~~1:50-1:100
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

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

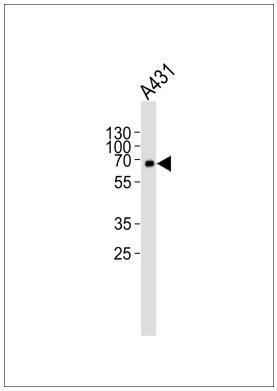
Background

May play an important role in regulating or promoting cell proliferation in some normal and neoplastically transformed cells.

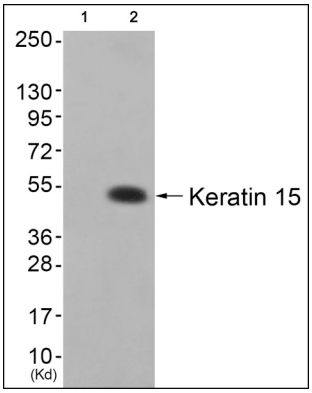
References

Yokoyama C.,et al.Biochem. Biophys. Res. Commun. 165:888-894(1989).
Funk C.D.,et al.FASEB J. 5:2304-2312(1991).
Takahashi Y.,et al.Biochem. Biophys. Res. Commun. 182:433-438(1992).
Diaz A.,et al.J. Biol. Chem. 267:10816-10822(1992).
Scott B.T.,et al.Blood Coagul. Fibrinolysis 13:519-531(2002).

Images

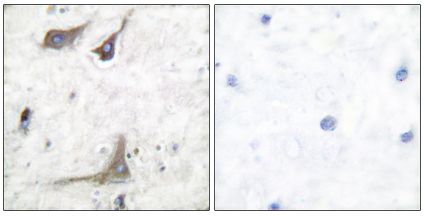


Western blot analysis of lysate from A431 cell line,using Cox1 Antibody(AP50673). AP50673 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug.



Western blot analysis of extracts from HuvEc cells (Lane 2), using Cox1 Antibody. The lane on the left is treated with systhesized peptide.

Immunohistochemical analysis of paraffin-embedded human brain tissue using COX1 antibody .



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