Data Sheet (Cat.No.TMAH-01014)

Anti-PTGS1 Antibody (7Y100)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human, Mouse
Conjugation:	Unconjugated
Clone:	7Y100
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. Western Blot -Positive WB detected in: HL60 whole cell lysate, SH-SY5Y whole cell lysate, Mouse liver tissue -All lanes: PTGS1 antibody at 1:2000 -Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution -Predicted band size: 69, 65, 62, 57, 72, 73 kDa -Observed band size: 72 kDa 2. Overlay histogram showing Hela cells stained with TMAH-01014 (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then incubated in 10% normal goat serum to block non-specific protein-protein interactions followedby the antibody (1μg/1*10^6 cells) for 1 h at 4°C.The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4°C. Control antibody (green line) was Rabbit IgG (1μg/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.
Application:	ELISA, WB, FCM
Recommended	WB:1:500-1:5000; FCM:1:20-1:200.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: Human COX1
Antigen Species:	Human
Gene ID:	5742
Uniprot ID:	P23219
Synonyms:	EC 1.14.99.1;COX-1;COX1;PGHS-1;PHS 1;Prostaglandin H2 synthase 1;PTGS 1;Prostaglandin-endoperoxide synthase 1;Cyclooxygenase-1;Prostaglandin G/H synthase 1;PGH synthase 1
Biology Area:	Cancer, Cardiovascular, Immunology, Metabolism, Signal transduction

Research Background

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. 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. 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. 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.

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