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Prostaglandin E Synthase/MPGES-1 Rabbit mAb

Catalog # AP75956

Product Information

Application	WB
Primary Accession	O14684
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	17102

Additional Information

Gene ID	9536
Other Names	PTGES
Dilution	WB~~1:500-1:1000
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

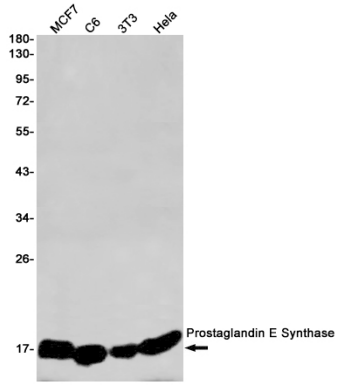
Name	PTGES
Function	Terminal enzyme of the cyclooxygenase (COX)-2-mediated prostaglandin E2 (PGE2) biosynthetic pathway. Catalyzes the glutathione-dependent oxidoreduction of prostaglandin endoperoxide H2 (PGH2) to prostaglandin E2 (PGE2) in response to inflammatory stimuli (PubMed:10377395, PubMed:10869354, PubMed:12244105, PubMed:12460774, PubMed:12672824, PubMed:17519235, PubMed:18682561). Similarly, catalyzes the conversion of PGH3 (derived from eicosapentaenoate (EPA, C20:5n-3)) to PGE3, though PGH2 remains the preferred substrate (PubMed:17519235). Plays a key role in inflammation response, fever and pain (By similarity). Also catalyzes the oxidoreduction of endocannabinoids into prostaglandin glycerol esters and PGG2 into 15- hydroperoxy-PGE2 (PubMed:12244105, PubMed:12672824). In addition, displays low glutathione transferase and glutathione-dependent peroxidase activities, toward 1-chloro-2,4-dinitrobenzene and 5- hydroperoxyicosatetraenoic acid (5-HPETE), respectively (PubMed:12672824).

Cellular Location	Membrane; Multi-pass membrane protein. Cytoplasm, perinuclear region. Note=Colocalizes with PTGS1/COX-1 and PTGS2/COX-2 in the perinuclear compartment

Background

The protein encoded by this gene is a glutathione-dependent prostaglandin E synthase. The expression of this gene has been shown to be induced by proinflammatory cytokine interleukin 1 beta (IL1B). Its expression can also be induced by tumor suppressor protein TP53, and may be involved in TP53 induced apoptosis. Knockout studies in mice suggest that this gene may contribute to the pathogenesis of collagen-induced arthritis and mediate acute pain during inflammatory responses.

Images



Western blot analysis of Prostaglandin E Synthase in MCF-7, C6, 3T3, Hela lysates using Prostaglandin E Synthase antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.