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PTGDS Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21088a

Product Information

Application	WB, E
Primary Accession	P41222
Reactivity	Human, Mouse
Predicted	Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB47844
Calculated MW	21029

Additional Information

Gene ID	5730
Other Names	Prostaglandin-H2 D-isomerase, Beta-trace protein, Cerebrin-28, Glutathione-independent PGD synthase, Lipocalin-type prostaglandin-D synthase, Prostaglandin-D2 synthase, PGD2 synthase, PGDS, PGDS2, PTGDS, PDS
Target/Specificity	This PTGDS antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 149-182 amino acids from the C-terminal region of human PTGDS.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PTGDS Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTGDS
Synonyms	PDS

Function	Catalyzes the conversion of PGH2 to PGD2, a prostaglandin involved in smooth muscle contraction/relaxation and a potent inhibitor of platelet aggregation (PubMed:20667974). Involved in a variety of CNS functions, such as sedation, NREM sleep and PGE2-induced allodynia, and may have an anti-apoptotic role in oligodendrocytes. Binds small non- substrate lipophilic molecules, including biliverdin, bilirubin, retinal, retinoic acid and thyroid hormone, and may act as a scavenger for harmful hydrophobic molecules and as a secretory retinoid and thyroid hormone transporter. Possibly involved in development and maintenance of the blood-brain, blood-retina, blood-aqueous humor and blood-testis barrier. It is likely to play important roles in both maturation and maintenance of the central nervous system and male reproductive system (PubMed:20667974, PubMed:9475419). Involved in PLA2G3-dependent maturation of mast cells. PLA2G3 is secreted by immature mast cells and acts on nearby fibroblasts upstream to PTDGS to synthesize PGD2, which in turn promotes mast cell maturation and degranulation via PTGDR (By similarity). Can also, catalyze the conversion of PGH3 (derived from eicosapentaenoate (EPA, C20:5n-3)) to PGD3, though PGH2 remains the preferred substrate (PubMed:17519235).
Cellular Location	Rough endoplasmic reticulum. Nucleus membrane. Golgi apparatus. Cytoplasm, perinuclear region. Secreted Note=Detected on rough endoplasmic reticulum of arachnoid and menigioma cells. Localized to the nuclear envelope, Golgi apparatus, secretory vesicles and spherical cytoplasmic structures in arachnoid trabecular cells, and to circular cytoplasmic structures in meningeal macrophages and perivascular microglial cells. In oligodendrocytes, localized to the rough endoplasmic reticulum and nuclear envelope. In retinal pigment epithelial cells, localized to distinct cytoplasmic domains including the perinuclear region. Also secreted
Tissue Location	Abundant in the brain and CNS, where it is expressed in tissues of the blood-brain barrier and secreted into the cerebro-spinal fluid. Abundantly expressed in the heart. In the male reproductive system, it is expressed in the testis, epididymis and prostate, and is secreted into the seminal fluid. Expressed in the eye and secreted into the aqueous humor. Lower levels detected in various tissue fluids such as serum, normal urine, ascitic fluid and tear fluid. Also found in a number of other organs including ovary, fimbriae of the fallopian tubes, kidney, leukocytes

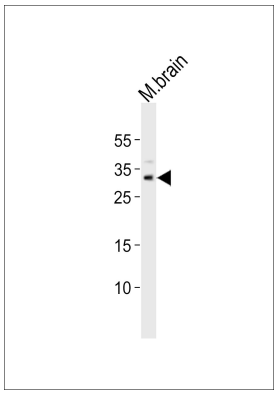
Background

Catalyzes the conversion of PGH2 to PGD2, a prostaglandin involved in smooth muscle contraction/relaxation and a potent inhibitor of platelet aggregation. Involved in a variety of CNS functions, such as sedation, NREM sleep and PGE2-induced allodynia, and may have an anti-apoptotic role in oligodendrocytes. Binds small non-substrate lipophilic molecules, including biliverdin, bilirubin, retinal, retinoic acid and thyroid hormone, and may act as a scavenger for harmful hydrophopic molecules and as a secretory retinoid and thyroid hormone transporter. Possibly involved in development and maintenance of the blood-brain, blood-retina, blood-aqueous humor and blood-testis barrier. It is likely to play important roles in both maturation and maintenance of the central nervous system and male reproductive system.

References

Nagata A.,et al.Proc. Natl. Acad. Sci. U.S.A. 88:4020-4024(1991).
Nagata A.,et al.Submitted (AUG-2006) to the EMBL/GenBank/DDBJ databases.
White D.M.,et al.J. Biol. Chem. 267:23202-23208(1992).
Lu J.C.,et al.(In) Robaire B., Chemes H., Morales C.R. (eds.);
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



Western blot analysis of lysate from mouse brain tissue lysate, using PTGDS Antibody (C-term)(Cat. #AP21088a). AP21088a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

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