10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Prostaglandin D Synthase Rabbit mAb

Catalog # AP75955

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	P41222
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	21029

Additional Information

Gene ID	5730
Other Names	PTGDS
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A IHC-F~~N/A
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

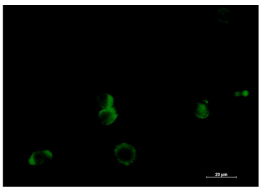
Name	PTGDS
Synonyms	PDS
Function	Catalyzes the conversion of PGH2 to PGD2, a prostaglandin involved in smooth muscle contraction/relaxation and a potent inhibitor of platelet aggregation (PubMed:20667974). Involved in a variety of CNS functions, such as sedation, NREM sleep and PGE2-induced allodynia, 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

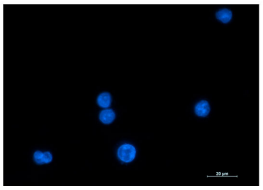
Background

The protein encoded by this gene is a glutathione-independent prostaglandin D synthase that catalyzes the conversion of prostaglandin H2 (PGH2) to postaglandin D2 (PGD2). PGD2 functions as a neuromodulator as well as a trophic factor in the central nervous system. PGD2 is also involved in smooth muscle contraction/relaxation and is a potent inhibitor of platelet aggregation. This gene is preferentially expressed in brain. Studies with transgenic mice overexpressing this gene suggest that this gene may be also involved in the regulation of non-rapid eye movement sleep.

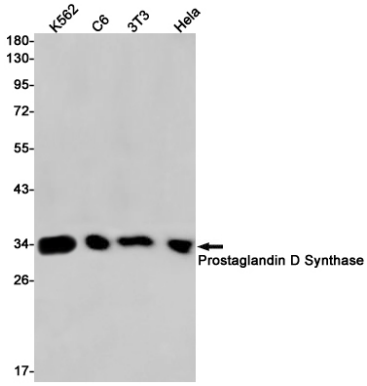
Images

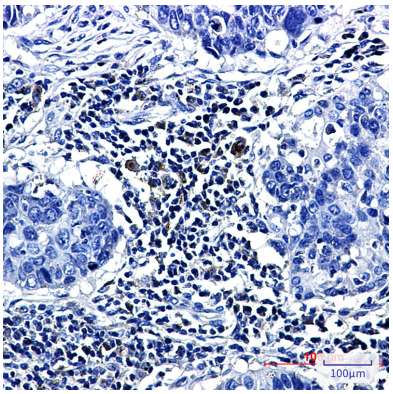


Immunocytochemistry analysis of Prostaglandin D Synthase (green) in K562 using Prostaglandin D Synthase antibody,and DAPI(blue).



Western blot analysis of Prostaglandin D Synthase in K562, C6, 3T3, Hela lysates using Prostaglandin D Synthase antibody.





Immunohistochemistry analysis of paraffin-embedded Human lung cancer tissue using Prostaglandin D Synthase antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

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