

## PTGDS Antibody (internal region)

Peptide-affinity purified goat antibody Catalog # AF4055a

## **Specification**

## PTGDS Antibody (internal region) - Product Information

Application WB, E
Primary Accession P41222

Other Accession NP 000945.3, 5730

Reactivity
Host
Clonality
Concentration
Contentration
Contentration
Concentration
Conc

Isotype IgG
Calculated MW 21029

## PTGDS Antibody (internal region) - Additional Information

#### **Gene ID 5730**

## **Other Names**

Prostaglandin-H2 D-isomerase, 5.3.99.2, Beta-trace protein, Cerebrin-28, Glutathione-independent PGD synthase, Lipocalin-type prostaglandin-D synthase, Prostaglandin-D2 synthase, PGDS synthase, PGDS, PGDS2, PTGDS, PDS

#### **Dilution**

WB~~1:1000 E~~N/A

#### **Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

# Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

## **Precautions**

PTGDS Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

## PTGDS Antibody (internal region) - 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:<a href="http://www.uniprot.org/citations/20667974" target="\_blank">20667974</a>). 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:<a href="http://www.uniprot.org/citations/20667974" target="\_blank">20667974</a>, PubMed:<a href="http://www.uniprot.org/citations/9475419" target="\_blank">9475419</a>, PubMed:<a href="http://www.uniprot.org/citations/9475419" target="\_blank">9475419</a>, 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).

#### **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

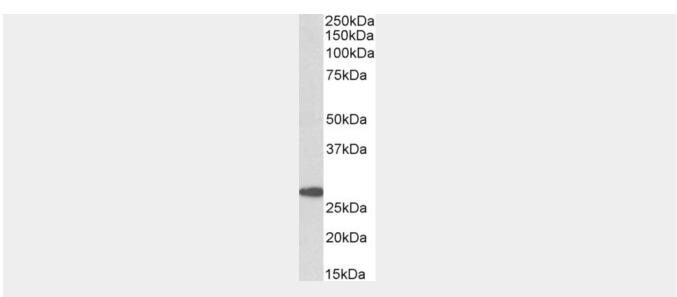
# PTGDS Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

# PTGDS Antibody (internal region) - Images





AF4055a (0.3  $\mu$ g/ml) staining of Human Cerebellum lysate (35  $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

# PTGDS Antibody (internal region) - Background

The immunizing peptide represents the N terminus of the mature protein.

## PTGDS Antibody (internal region) - References

Lipocalin-type prostaglandin D synthase protects against oxidative stress-induced neuronal cell death. Fukuhara A, Yamada M, Fujimori K, Miyamoto Y, Kusumoto T, Nakajima H, Inui T. Biochem J. 2012 Apr 1;443(1):75-84. PMID: 22248185