

# PGD2 synthase (T-17): sc-14825

## BACKGROUND

Human PGD synthase is the key enzyme for production of the D and J series of prostanoids in the immune system and mast cells. This enzyme is the first member of the sigma class glutathione S-transferases (GST) from vertebrates and contains a prominent cleft as the active site, which is unique among members of the GST superfamily. The human PGD synthase gene, which maps to chromosome 4q22.1-q23, is expressed in a species-specific manner. For instance, the human gene is widely distributed, whereas the mouse gene is only expressed in oviduct and skin. Human PGD synthase is expressed in the cytoplasm of human megakaryoblastic CMK cells prior to differentiation into platelets, which have no PGD synthase activity. Another member of the PGD synthase family, PGD2 synthase, catalyzes the conversion of PGH2 to PGD2 and is essential for the synthesis of PGD2 in the brain. Unlike PGD synthase, PGD2 synthase is not dependent on the presence of glutathione for its activity. The human PGD2 synthase gene maps to chromosome 9q34.3.

## CHROMOSOMAL LOCATION

Genetic locus: PTGDS (human) mapping to 9q34.3; Ptgds (mouse) mapping to 2 A3.

## SOURCE

PGD2 synthase (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PGD2 synthase of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14825 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PGD2 synthase (T-17) is recommended for detection of PGD2 synthase of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PGD2 synthase siRNA (h): sc-41640, PGD2 synthase siRNA (m): sc-41641, PGD2 synthase shRNA Plasmid (h): sc-41640-SH, PGD2 synthase shRNA Plasmid (m): sc-41641-SH, PGD2 synthase shRNA (h) Lentiviral Particles: sc-41640-V and PGD2 synthase shRNA (m) Lentiviral Particles: sc-41641-V.

Molecular Weight of PGD2 synthase: 21 kDa.

Positive Controls: mouse heart extract: sc-2254 or mouse brain extract: sc-2253.

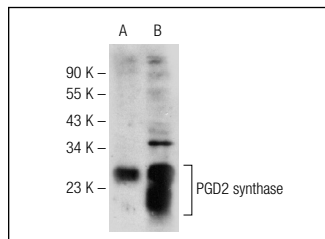
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



PGD2 synthase (T-17): sc-14825. Western blot analysis of PGD2 synthase expression in human brain (A) and mouse brain (B) tissue extracts.

## SELECT PRODUCT CITATIONS

- Mouihate, A., et al. 2004. A novel antipyretic action of 15-deoxy-Delta12,14-prostaglandin J2 in the rat brain. *J. Neurosci.* 24: 1312-1318.
- Kalamarides, M., et al. 2008. Natural history of meningioma development in mice reveals: a synergy of Nf2 and p16(Ink4a) mutations. *Brain Pathol.* 18: 62-70.
- Linke, B., et al. 2009. Toponomics analysis of drug-induced changes in arachidonic acid-dependent signaling pathways during spinal nociceptive processing. *J. Proteome Res.* 8: 4851-4859.
- Kalamarides, M., et al. 2011. Identification of a progenitor cell of origin capable of generating diverse meningioma histological subtypes. *Oncogene* 30: 2333-2344.

## PROTOCOLS

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