

PGE synthase (FL-152): sc-20771

BACKGROUND

Prostaglandin E synthase (PGE synthase), also known as PIG12 and MGST1-L1, is a member of protein super family MAPEG, which consists of membrane associated proteins involved in eicosanoid and glutathione metabolism. The expression of this membrane-associated protein can be induced by the proinflammatory cytokine, IL-1b. PGE synthase is expressed in seminal vesicles, deferent ducts, kidney, heart and spleen. The enzyme activity of PGE synthase in most organs is glutathione-dependent. PGE synthase may play a significant role in the progression of Alzheimer's disease. Human PGE synthase is localized to chromosome 9q34.11.

REFERENCES

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- Tanaka, Y., et al. 1987. Immunochemical and kinetic evidence for two different prostaglandin H-prostaglandin E isomerases in sheep vesicular gland microsomes. *J. Biol. Chem.* 262: 1374-1381.
- Watanabe, K., et al. 1997. Two types of microsomal prostaglandin E synthase: glutathione-dependent and -independent prostaglandin E synthases. *Biochem. Biophys. Res. Commun.* 235: 148-152.
- Jakobsson, P.J., et al. 1999. Common structural features of MAPEG—a widespread superfamily of membrane associated proteins with highly divergent functions in eicosanoid and glutathione metabolism. *Protein Sci.* 8: 689-692.
- Jakobsson, P.J., et al. 1999. Identification of human prostaglandin E synthase: a microsomal, glutathione-dependent, inducible enzyme, constituting a potential novel drug target. *Proc. Natl. Acad. Sci. USA* 96: 7220-7225.
- Forsberg, L., et al. 2000. Human glutathione dependent prostaglandin E synthase: gene structure and regulation. *FEBS Lett.* 471: 78-82.
- Satoh, K., et al. 2000. Expression of prostaglandin E synthase mRNA is induced in β -amyloid treated rat astrocytes. *Neurosci. Lett.* 283: 221-223.

CHROMOSOMAL LOCATION

Genetic locus: PTGES (human) mapping to 9q34.11; Ptges (mouse) mapping to 2 B.

SOURCE

PGE synthase (FL-152) is a rabbit polyclonal antibody raised against amino acids 1-152 representing full length PGE synthase of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

PGE synthase (FL-152) is recommended for detection of PGE synthase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

PGE synthase (FL-152) is also recommended for detection of PGE synthase in additional species, including porcine.

Suitable for use as control antibody for PGE synthase siRNA (h): sc-41642, PGE synthase siRNA (m): sc-41643, PGE synthase shRNA Plasmid (h): sc-41642-SH, PGE synthase shRNA Plasmid (m): sc-41643-SH, PGE synthase shRNA (h) Lentiviral Particles: sc-41642-V and PGE synthase shRNA (m) Lentiviral Particles: sc-41643-V.

Molecular Weight of PGE synthase: 17 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, U-87 MG cell lysate: sc-2411 or Caki-1 cell lysate: sc-2224.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Enami, Y., et al. 2009. Hepatic stellate cells promote hepatocyte engraftment in rat liver after prostaglandin-endoperoxide synthase inhibition. *Gastroenterology* 136: 2356-2364.
- Roth, U., et al. 2010. Differential expression proteomics of human colorectal cancer based on a syngeneic cellular model for the progression of adenoma to carcinoma. *Proteomics* 10: 194-202.

RESEARCH USE

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



Try **PGE synthase (A-3): sc-166308** or **PGE synthase (B-6): sc-166309**, our highly recommended monoclonal alternatives to PGE synthase (FL-152).