

# PGE synthase (C-20): sc-12269

## 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 pro-inflammatory cytokine, IL-1 $\beta$ . 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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- 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  $\beta$ -amyloid treated rat astrocytes. *Neurosci. Lett.* 283: 221-223.

## CHROMOSOMAL LOCATION

Genetic locus: PTGES (human) mapping to 9q34.11.

## SOURCE

PGE synthase (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PGE synthase of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-12269 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PGE synthase (C-20) is recommended for detection of PGE synthase of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (C-20) is also recommended for detection of PGE synthase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PGE synthase siRNA (h): sc-41642, PGE synthase shRNA Plasmid (h): sc-41642-SH and PGE synthase shRNA (h) Lentiviral Particles: sc-41642-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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **PGE synthase (A-3): sc-166308** or **PGE synthase (B-6): sc-166309**, our highly recommended monoclonal alternatives to PGE synthase (C-20).