

PGE synthase (H-3): sc-365844

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 β . 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

- Ogino, N., et al. 1977. Prostaglandin endoperoxide E isomerase from bovine vesicular gland microsomes, a glutathione-requiring enzyme. *J. Biol. Chem.* 252: 890-895.
- 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 wide-spread superfamily of membrane associated proteins with highly divergent functions in eicosanoid and glutathione metabolism. *Protein Sci.* 8: 689-692.

CHROMOSOMAL LOCATION

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

SOURCE

PGE synthase (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 51-82 an internal region of PGE synthase of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PGE synthase (H-3) is available conjugated to agarose (sc-365844 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365844 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365844 PE), fluorescein (sc-365844 FITC), Alexa Fluor® 488 (sc-365844 AF488), Alexa Fluor® 546 (sc-365844 AF546), Alexa Fluor® 594 (sc-365844 AF594) or Alexa Fluor® 647 (sc-365844 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365844 AF680) or Alexa Fluor® 790 (sc-365844 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365844 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PGE synthase (H-3) is recommended for detection of PGE synthase of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

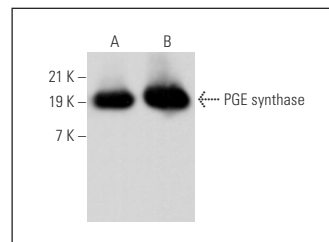
PGE synthase (H-3) is also recommended for detection of PGE synthase in additional species, including porcine.

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.

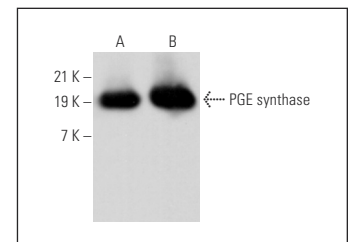
Molecular Weight of PGE synthase: 17 kDa.

Positive Controls: NCI-H292 whole cell lysate: sc-364179, SW480 cell lysate: sc-2219 or Jurkat whole cell lysate: sc-2204.

DATA



PGE synthase (H-3): sc-365844. Western blot analysis of PGE synthase expression in SW480 (A) and NCI-H292 (B) whole cell lysates.



PGE synthase (H-3): sc-365844. Western blot analysis of PGE synthase expression in SW480 (A) and NCI-H292 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Gugliandolo, E., et al. 2017. Anti-inflammatory effect of ATB-352, a H₂S-releasing ketoprofen derivative, on lipopolysaccharide-induced periodontitis in rats. *Pharmacol. Res.* 132: 220-231.
- Neuschäfer-Rube, F., et al. 2023. LDL-dependent regulation of TNF α /PGE2 induced COX-2/mPGES-1 expression in human macrophage cell lines. *Inflammation*. E-published.

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.

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