

PGE synthase (A-3): sc-166308



The Power to Question

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-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.

CHROMOSOMAL LOCATION

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

SOURCE

PGE synthase (A-3) is a mouse monoclonal antibody raised against amino acids 1-152 representing full length PGE synthase of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PGE synthase (A-3) is available conjugated to agarose (sc-166308 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166308 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166308 PE), fluorescein (sc-166308 FITC), Alexa Fluor[®] 488 (sc-166308 AF488), Alexa Fluor[®] 546 (sc-166308 AF546), Alexa Fluor[®] 594 (sc-166308 AF594) or Alexa Fluor[®] 647 (sc-166308 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166308 AF680) or Alexa Fluor[®] 790 (sc-166308 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

PGE synthase (A-3) is recommended for detection of PGE synthase of 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), immunohistochemistry (including paraffin-embedded sections) (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 PGE synthase siRNA (h): sc-41642, PGE synthase shRNA Plasmid (h): sc-41642-SH and PGE synthase shRNA (h) Lentiviral Particles: sc-41642-V.

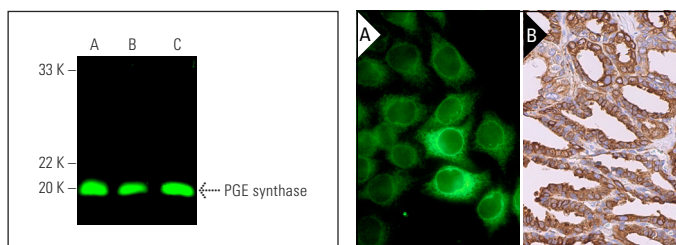
Molecular Weight of PGE synthase: 17 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, Caki-1 cell lysate: sc-2224 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PGE synthase (A-3): sc-166308. Near-infrared western blot analysis of PGE synthase expression in U-87 MG (A), Caki-1 (B) and HeLa (C) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.

PGE synthase (A-3): sc-166308. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Pepin, N.L., et al. 2014. Generation of human endometrial knockout cell lines with the CRISPR-Cas9 system confirms the prostaglandin F2 α synthase activity of aldo-ketoreductase 1B1. *Mol. Hum. Reprod.* 20: 650-663.
- Krughoff, K., et al. 2021. The effect of botulinum toxin on ureteral inflammation. *World J. Urol.* 39: 2197-2204.
- Io, S., et al. 2021. Capturing human trophoblast development with naive pluripotent stem cells *in vitro*. *Cell Stem Cell* 28: 1023-1039.e13.
- Rempel, L.M., et al. 2021. Investigations on the potential role of prostaglandin E2 in canine uterine inertia. *Theriogenology* 175: 134-147.
- Hedbrant, A., et al. 2022. Green, black and rooibos tea inhibit prostaglandin E2 formation in human monocytes by inhibiting expression of enzymes in the prostaglandin E2 pathway. *Molecules* 27: 397.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.