

PGI2 synthase (H-250): sc-20933

BACKGROUND

Prostacyclin (also known as prostaglandin I₂) is a potent vasodilator and inhibitor of platelet aggregation. The enzyme PGI₂ synthase (also known as prostacyclin synthase) catalyzes the isomerization of prostaglandin H₂ (PGH₂) to prostacyclin. Although it has absorbance spectral features characteristic of the cytochrome P450s, PGI₂ has no monooxygenase activity and does not require an external source of electrons to initiate its enzyme reaction. PGI₂ synthase is the single member of family 8 of the cytochrome P450 superfamily. PGI₂ synthase is a polypeptide of 500 amino acids with sequence homology to cholesterol 7- α -monooxygenase, a member of the CYP7 family of cytochrome P450s. The gene which encodes PGI₂ synthase maps to human chromosome 20q13.13.

REFERENCES

- Miyata, A., et al. 1994. Molecular cloning and expression of human prostacyclin synthase. *Biochem. Biophys. Res. Commun.* 200: 1728-1734.
- Wang, L.H. and Chen, L. 1996. Organization of the gene encoding human prostacyclin synthase. *Biochem. Biophys. Res. Commun.* 226: 631-637.

CHROMOSOMAL LOCATION

Genetic locus: PTGIS (human) mapping to 20q13.13; Ptgis (mouse) mapping to 2 H3.

SOURCE

PGI₂ synthase (H-250) is a rabbit polyclonal antibody raised against amino acids 41-290 mapping near the N-terminus of PGI₂ 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.

APPLICATIONS

PGI₂ synthase (H-250) is recommended for detection of PGI₂ 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), 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).

PGI₂ synthase (H-250) is also recommended for detection of PGI₂ synthase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PGI₂ synthase siRNA (h): sc-37236, PGI₂ synthase siRNA (m): sc-37237, PGI₂ synthase shRNA Plasmid (h): sc-37236-SH, PGI₂ synthase shRNA Plasmid (m): sc-37237-SH, PGI₂ synthase shRNA (h) Lentiviral Particles: sc-37236-V and PGI₂ synthase shRNA (m) Lentiviral Particles: sc-37237-V.

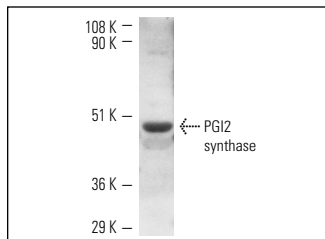
Molecular Weight of PGI₂ synthase: 52 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810.

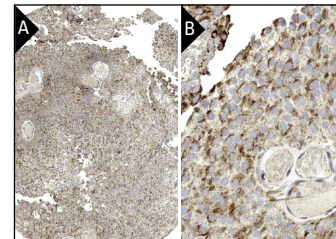
STORAGE

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

DATA



PGI₂ synthase (H-250): sc-20933. Western blot analysis of PGI₂ synthase expression in rat skeletal muscle tissue extract.



PGI₂ synthase (H-250): sc-20933. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urothelial cancer tissue showing cytoplasmic staining of tumor cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- La Rocca, G., et al. 2009. Oxidative stress induces myeloperoxidase expression in endocardial endothelial cells from patients with chronic heart failure. *Basic Res. Cardiol.* 104: 307-320.
- Riehl, T.E., et al. 2011. COX-1^{+/-} COX-2^{-/-} genotype in mice is associated with shortened time to carotid artery occlusion through increased PAI-1. *J. Thromb. Haemost.* 9: 350-360.
- Sun, L., et al. 2012. Combination of haptoglobin and osteopontin could predict colorectal cancer hepatic metastasis. *Ann. Surg. Oncol.* 19: 2411-2419.
- Lichao, S., et al. 2012. Overexpression of PTGIS could predict liver metastasis and is correlated with poor prognosis in colon cancer patients. *Pathol. Oncol. Res.* 18: 563-569.

RESEARCH USE

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

PROTOCOLS

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



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Try **PGI₂ synthase (3B11): sc-293247**, our highly recommended monoclonal alternative to PGI₂ synthase (H-250).