

# PGDH (m): 293T Lysate: sc-122517

## BACKGROUND

Prostaglandins are implicated in many physiologic and cellular processes, such as inflammation. NAD<sup>+</sup>-dependent 15-hydroxyprostaglandin dehydrogenase (PGDH) is the fundamental enzyme of prostaglandin degradation. PGDH, an ubiquitous enzyme, strongly reduces the biologic activity of these molecules by catalyzing the oxidation of the 15-hydroxyl group of prostaglandins to a keto group. Cortisol reduces PGDH activity in human placental cells. 11- $\beta$ -hydroxysteroid dehydrogenase type II (HSD11B2) converts cortisol to cortisone. In preeclampsia, a disorder characterized by high blood pressure and protein in the urine during pregnancy and the postpartum period, HSD11B2 mRNA expression is reduced, leading to a decrease in HSD11B2 activity. Therefore, the diminished conversion of placental cortisol may lead to reduced PGDH mRNA expression by means of an autocrine or paracrine mechanism.

## REFERENCES

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3. Gee, J.R., et al. 2003. Cytokeratin 20, AN43, PGDH and Cox-2 expression in transitional and squamous cell carcinoma of the bladder. *Urol. Oncol.* 21: 266-270.
4. Johnson, R.F., et al. 2004. Regulation of 15-hydroxyprostaglandin dehydrogenase (PGDH) gene activity, messenger ribonucleic acid processing and protein abundance in the human chorion in late gestation and labor. *J. Clin. Endocrinol. Metab.* 89: 5639-5648.
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6. Cho, H., et al. 2005. Key NAD<sup>+</sup>-binding residues in human 15-hydroxyprostaglandin dehydrogenase. *Arch. Biochem. Biophys.* 433: 447-453.
7. Ding, Y., et al. 2005. NAD<sup>+</sup>-linked 15-hydroxyprostaglandin dehydrogenase (15-PGDH) behaves as a tumor suppressor in lung cancer. *Carcinogenesis* 26: 65-72.
8. Backlund, M.G., et al. 2005. 15-hydroxyprostaglandin dehydrogenase is downregulated in colorectal cancer. *J. Biol. Chem.* 280: 3217-3223.
9. Hamza, A., et al. 2005. Understanding human 15-hydroxyprostaglandin dehydrogenase binding with NAD<sup>+</sup> and PGE<sub>2</sub> by homology modeling, docking and molecular dynamics simulation. *Bioorg. Med. Chem.* 13: 4544-4551.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

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

## CHROMOSOMAL LOCATION

Genetic locus: Hpgd (mouse) mapping to 8 B2.

## PRODUCT

PGDH (m): 293T Lysate represents a lysate of mouse PGDH transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

PGDH (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PGDH antibodies. Recommended use: 10-20  $\mu$ l per lane.

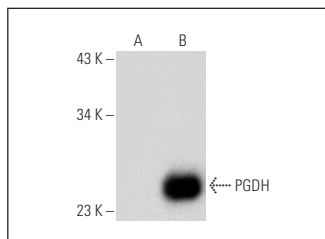
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PGDH (H-3): sc-271418 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PGDH expression in PGDH transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



PGDH (H-3): sc-271418. Western blot analysis of PGDH expression in non-transfected: sc-117752 (A) and mouse PSC1 transfected: sc-122517 (B) 293T whole cell lysates.

## RESEARCH USE

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