PGDH (H-3): sc-271418

BACKGROUND

Prostaglandins are implicated in many physiologic and cellular processes, such as inflammation. NAD⁺-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-β-hydroxysteroid dehydrogenase type II (HS211B2) converts cortisol to cortisone. In preeclampsia, a disorder characterized by high blood pressure and protein in the urine during pregnancy and the postpartum period, HS211B2 mRNA expression is reduced, leading to a decrease in HS211B2 activity. Therefore, the diminished conversion of placental cortisol may lead to reduced PGDH mRNA expression by means of an autocrine or paracrine mechanism.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: HPGD (human) mapping to 4q34.1; Hpgd (mouse) mapping to B2.

SOURCE

PGDH (H-3) is a mouse monoclonal antibody raised against amino acids 1-263 of PGDH of human origin.

PRODUCT

Each vial contains 200 µg IgG1, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PGDH (H-3) is available conjugated to agarose (sc-271418 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271418 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271418 PE), fluorescein (sc-271418 FITC), Alexa Fluor® 488 (sc-271418 AF488), Alexa Fluor® 546 (sc-271418 AF546), Alexa Fluor® 594 (sc-271418 AF594) or Alexa Fluor® 647 (sc-271418 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271418 AF680) or Alexa Fluor® 790 (sc-271418 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF, and FCM.

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APPLICATIONS

PGDH (H-3) is recommended for detection of PGDH of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for PGDH siRNA (h): sc-61330, PGDH siRNA (m): sc-61331, PGDH shRNA Plasmid (h): sc-61330-SH, PGDH shRNA Plasmid (m): sc-61331-SH, PGDH shRNA (h) Lentiviral Particles: sc-61330-V and PGDH shRNA (m) Lentiviral Particles: sc-61331-V.

Molecular Weight of PGDH: 30 kDa.

Positive Controls: A549 cell lysate: sc-2413 or human placenta extract: sc-363772.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG Bp-HRP: sc-516102 or m-IgG 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-Garage: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA

PGDH (H-3): sc-271418. Near-infrared western blot analysis of PGDH expression in A549 whole cell lysate (A) and human placenta tissue extract (B). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG BP-OR-880: sc-516180.

PGDH (H-3): sc-271418. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and nuclear staining of urothelial cells.

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 for detailed protocols and support products.