

Product Information



Prostaglandin D Synthase (hematopoietic-type; human recombinant) Western Ready Control

Item No. 10009625

Synonyms:	H-PGDS, Hematopoietic-PGDS
Source:	Human recombinant N-terminal histadine-tagged protein; purified from an <i>E. coli</i>
Amino Acids:	2-199
Accession No.:	NP_055300
M_r:	~24.3 kDa
Purity:	Whole cell lysate; a single band is detected on a western blot when probed with Cayman's Prostaglandin D Synthase (hematopoietic type; human) Monoclonal Antibody (Catalog No. 10004345)
Stability:	≥2 years at -20°C
Supplied in:	Laemml buffer (62.5 mM Tris-HCl pH 6.8, containing 2% SDS, 10% glycerol 5% 2-mercaptoethanol, and bromophenol blue)
Applications:	Positive control for western blotting

Prostaglandin D synthase (PGDS) catalyzes the isomerization of PGH₂ to produce PGD₂. PGD₂ induces sleep, regulates nociception, inhibits platelet aggregation and acts as an allergic mediator. Two distinct types of PGDS have been identified, namely the lipocalin-type enzyme (β-trace) and the hematopoietic enzyme.¹⁻⁴ Lipocalin-type PGDS is localized in the central nervous system and male genital organs of various mammals and the human heart. This enzyme has been identified as β-trace, which is a major protein in human cerebrospinal fluid.^{3,4} Hematopoietic-PGDS (H-PGDS) is widely distributed in the peripheral tissues and is localized in the antigen-presenting cells, mast cells, and megakaryocytes. This enzyme, which requires glutathione for activity, belongs to the sigma-class of glutathione-S-transferases and is implicated in allergic and inflammatory diseases.^{1,4,5}

Laboratory Procedures

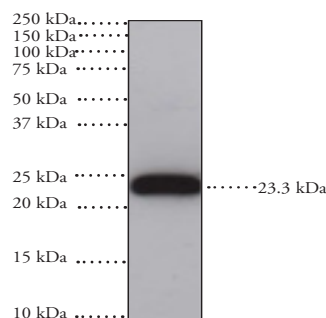
Western ready controls are designed to serve as positive controls on western blots. This H-PGDS western ready control is supplied pre-boiled in 55 μl of Laemml buffer. To use, thaw and load 10 μl of H-PGDS western ready control per well and follow a standard western blotting protocol. The amount needed per well will depend on the antibody and detection system used.

References

1. Kanaoka, Y., Fujimori, K., Kikuno, R., *et al. Eur. J. Biochem.* **267**, 3315-3322 (2000).
2. Jowsey, I.R., Thomson, A.M., Flanagan, J.U., *et al. Biochem. J.* **359**, 507-516 (2001).
3. Urade, Y., Watanabe, K., and Hayaishi, O. *J. Lipid Mediat. Cell Signal.* **12**, 257-273 (1995).
4. Kanaoka, Y., Ago, H., Inagaki, E., *et al. Cell* **90**, 1085-1095 (1997).
5. Urade, Y., Fujimoto, N., Ujihara, M., *et al. J. Biol. Chem.* **262(8)**, 3820-3825 (1987).

Related Products

Prostaglandin D₂ - Item No. 12010 • Prostaglandin D Synthase (hematopoietic-type) Polyclonal Antibody - Item No. 160013 • Prostaglandin D Synthase (hematopoietic-type; human) Polyclonal Antibody - Item No. 10004337 • Prostaglandin D Synthase (hematopoietic-type; human) Monoclonal Antibody - Item No. 10004345 • Prostaglandin D Synthase (hematopoietic-type; murine) Polyclonal Antibody- Item No. 10004348 • Prostaglandin D Synthase (hematopoietic-type; murine) Monoclonal Antibody- Item No. 10004349 • Prostaglandin D Synthase (hematopoietic-type; human recombinant) - Item No. 10006593 • Prostaglandin D Synthase (lipocalin-type; human) Western Ready Control - Item No. 10009741



Western blot of human recombinant H-PGDS probed with Cayman's Prostaglandin D Synthase (hematopoietic type; human) Monoclonal Antibody (Catalog No. 10004345).

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

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