

Product Information



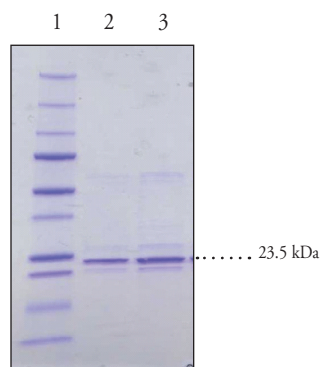
Prostaglandin D Synthase (hematopoietic-type; mouse recombinant)

Item No. 10004347 • Lot No. XXXX

Synonyms:	Hematopoietic-PGDS, H-PGDS, mH-PGDS
Source:	Mouse recombinant enzyme purified from an <i>E. coli</i> overexpression system
MW:	23.5 kDa
Purity:	≥85%
Stability:	≥6 months at -80°C
Supplied in:	50 mM sodium phosphate, pH 7.2, containing 100 mM sodium chloride, 0.5 mM EDTA, and 50% glycerol
Protein Concentration:	XX mg/ml
Activity:	XX U/ml
Specific Activity:	XX μmoles/min/mg; One unit of enzyme produced 1 μmole of PGD ₂ per minute at 25°C in 100 mM Tris-HCl, pH 8.0, 1 mM GSH, 1 mM MgCl ₂ , and 40 μM PGH ₂ .

Prostaglandin D synthase (PGD synthase) 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 PGD synthase have been identified, namely the lipocalin-type enzyme (β-trace) and the hematopoietic enzyme.¹⁻⁴ Lipocalin-type PGD synthase 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 PGD synthase is widely distributed in the peripheral tissues and is localized in the antigen-presenting cells, mast cells, and megakaryocytes.¹ This enzyme, which requires glutathione for activity, belongs to the sigma-class of glutathione-S-transferases and is 23.5 kDa in size.^{1,4,5}

For long term storage aliquot the enzyme and store at -80°C. The activity of murine H-PGDS was determined using Cayman's PGD₂ EIA Monoclonal Kit.



1. MW Standards
2. H-PGDS (0.5 μg)
3. H-PGDS (1 μg)

References

1. Kanaoka, Y., Fujimori, K., Kikuno, R., *et al.* Structure and chromosomal localization of human and mouse genes for hematopoietic prostaglandin D synthase. *Eur. J. Biochem.* **267**, 3315-3322 (2000).
2. Jowsey, I.R., Thomson, A.M., Flanagan, J.U., *et al.* Mammalian class sigma glutathione s-transferases: catalytic properties and tissue-specific expression of human and rat GSH-dependent prostaglandin D₂ synthases. *Biochem. J.* **359**, 507-516 (2001).
3. Urade, Y., Watanabe, K., and Hayaishi, O. Prostaglandin D, E, and F synthases. *J. Lipid Mediat. Cell Signal.* **12**, 257-273 (1995).
4. Kanaoka, Y., Ago, H., Inagaki, E., *et al.* Cloning and crystal structure of hematopoietic prostaglandin D synthase. *Cell* **90**, 1085-1095 (1997).
5. Urade, Y., Fujimoto, N., Ujihara, M., *et al.* Biochemical and immunological characterization of rat spleen prostaglandin D synthetase. *J. Biol. Chem.* **262(8)**, 3820-3825 (1987).

Related Products

Prostaglandin D₂ - Item No. 12010 • Prostaglandin H₂ - Item No. 17020 • Prostaglandin D Synthase (lipocalin-type) Polyclonal Antibody - Item No. 160003 • Prostaglandin D Synthase (hematopoietic-type) Polyclonal Antibody - Item No. 160013 • Prostaglandin D₂ FPIA Kit - Green - Item No. 500581 • 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; mouse) Polyclonal Antibody - Item No. 10004348

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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