

# PRODUCT INFORMATION



## Prostaglandin D Synthase (lipocalin-type; human recombinant)

Item No. 10006788

### Overview and Properties

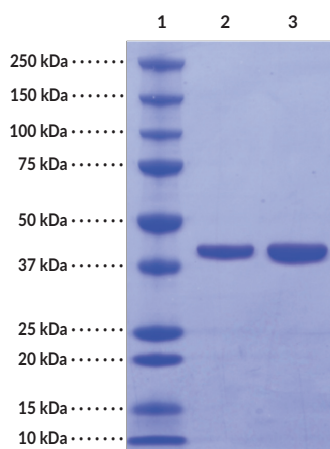
**Synonyms:** Lipocalin-PGDS, L-PGDS  
**Source:** Recombinant N-terminal GST-Tagged enzyme purified from *E. coli*  
**Uniprot No.:** P41222  
**Molecular Weight:** 46 kDa/subunit  
**Storage:** -80°C (as supplied)  
**Stability:** ≥2 years  
**Purity:** *batch specific* (≥85% estimated by SDS-PAGE)  
**Supplied in:** 50 mM sodium phosphate, pH 7.2, with 20% glycerol, 150 mM sodium chloride, 1 mM DTT, and 0.5 mM EDTA

### Protein

**Concentration:** *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers

Lane 2: Prostaglandin D Synthase (lipocalin-type; human recombinant) (2 µg)

Lane 3: Prostaglandin D Synthase (lipocalin-type; human recombinant) (4 µg)

Representative gel image shown; actual purity may vary between each batch.

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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Prostaglandin D synthase (PGDS) catalyzes the isomerization of  $\text{PGH}_2$  to produce  $\text{PGD}_2$ .  $\text{PGD}_2$  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 and the hematopoietic enzyme.<sup>1-3</sup> L-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  $\beta$ -trace, which is a major protein in human cerebrospinal fluid.<sup>1</sup>

Cayman's L-PGDS (human recombinant) is a highly-purified GST-fusion protein isolated from an *E. coli* expression system. Cysteines 89 and 186 have been changed to alanines to prevent protein misfolding.

## References

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1. Urade, Y., Watanabe, K., and Hayaishi, O. Prostaglandin D, E, and F synthases. *J. Lipid Mediat. Cell Signal* **12(2-3)**, 257-273 (1995).
2. Urade, Y. and Hayaishi, O. Prostaglandin D synthase: Structure and function. *Vitam. Horm.* **58**, 89-120 (2000).
3. Urade, Y. and Eguchi, N. Lipocalin-type and hematopoietic prostaglandin D synthases as a novel example of functional convergence. *Prostaglandins Other Lipid Mediat.* **68-69**, 375-382 (2002).

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