
Product Data Sheet

Product Name: HPGDS Human
 Cat. No.: GP21806
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Hematopoietic prostaglandin D synthase; H-PGDS; GST class-sigma; Glutathione S-transferase; Glutathione-dependent PGD synthase; Glutathione-requiring prostaglandin D synthase; Prostaglandin-H2 D-isomerase; HPGDS; GSTS; PGDS; PTGDS2GSTS; PGD2; GSTS1-1.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH MGSHPMPNYKL TYFNMRGRAE IIRYIFAYLD IQYEDHRIEQ ADWPEIKSTL PFGKIPILEV DGLTLHQSLA IARYLTKNTD LAGNTEMEQC HVDAIVDTLD DFMSCFPWAE KKQDVKEQMF NELLTYNAPH LMQDLDTYLG GREWLIGNSV TWADFYWEIC STLLVFKPD LLDNHPRLV LTRKKVQAIPA VANWIKRRPQ TKL.		
Formulation	HPGDS protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH8.0), 10% glycerol, 0.15M NaCl and 1mM DTT.		

Introduction

Hematopoietic Prostaglandin D Synthase (HPGDS) belongs to the sigma class glutathione-S-transferase family. The HPGDS enzyme catalyzes the conversion of PGH₂ to PGD₂ and has a role in the production of prostanoids in the immune system and mast cells. The presence of the HPGDS enzyme can be utilized to identify the differentiation stage of human megakaryocytes. Furthermore, HPGDS is a prostaglandin involved in smooth muscle contraction/relaxation and an effective inhibitor of platelet aggregation, and the conjugation of glutathione with a extensive range of aryl halides and organic isothiocyanates. In addition, HPGDS displays low glutathione-peroxidase activity towards cumene hydroperoxide. HPGDS is expressed in a number of megakaryocytic cell lines but not in platelets. HPGDS is highly expressed in the adipose tissue, macrophages and placenta; however it is expressed at lower levels in the lung, heart, lymph nodes, appendix, bone marrow and fetal liver.

Caution: Product has not been fully validated for medical applications. For research use only.

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Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

HPGDS Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 223 amino acids (1-199 a.a.) and having a molecular mass of 25.9kDa. HPGDS is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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