

## HPGDS Human

**Description:** 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.

Catalog #: ENPS-623

For research use only.

**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.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MGSHMPNYKL TYFNMRGRAE  
IIRYIFAYLD IQYEDHRIEQ ADWPEIKSTL PFGKPILEV DGLTLHQSLA IARYLTKNTD  
LAGNTEMEQC HVDAIVDTLD DFMSCFPWAE KKQDVKEQMF NELLTYNAPH LMQDLDTYLG  
GREWLIGNSV TWADFYWEIC STLLLVFKPD LLDNHPRLVT LRKKVQAIPA VANWIKRRPQ TKL.

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

### Formulation:

HPGDS protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH8.0), 10% glycerol, 0.15M NaCl and 1mM DTT.

### 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.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

Hematopoietic Prostaglandin D Synthase (HPGDS) belongs to the sigma class glutathione-S-transferase family. The HPGDS enzyme catalyzes the conversion of PGH<sub>2</sub> to PGD<sub>2</sub> 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.

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