

# Human PTGDS / L-PGDS Protein (His Tag)



Sino Biological  
Biological Solution Specialist

Catalog Number: 13346-H08H

## General Information

### Gene Name Synonym:

L-PGDS; LPGDS; PDS; PGD2; PGDS; PGDS2

### Protein Construction:

A DNA sequence encoding the human PTGDS (P41222) (Met1-Gln190) was expressed with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 80 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per  $\mu\text{g}$  of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at  $-70\text{ }^{\circ}\text{C}$

**Predicted N terminal:** Ala 23

### Molecular Mass:

The recombinant human PTGDS consists of 179 amino acids and predicts a molecular mass of 20.1 KDa. It migrates as an approximately 28 KDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

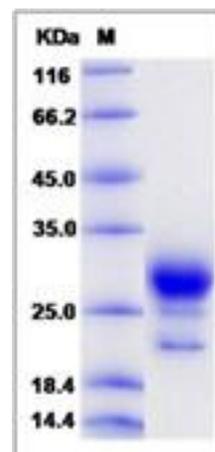
Store it under sterile conditions at  $-20\text{ }^{\circ}\text{C}$  to  $-80\text{ }^{\circ}\text{C}$  upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

PTGDS, also known as L-PGDS, belongs to the calycin superfamily, lipocalin family. Lipocalins share limited regions of sequence homology and a common tertiary structure architecture. They transport small hydrophobic molecules such as steroids, bilins, retinoids, and lipids. PTGDS is a glutathione-independent prostaglandin D synthase that catalyzes the conversion of PGH<sub>2</sub> to PGD<sub>2</sub>. It is involved in smooth muscle contraction/relaxation and a variety of central nervous system functions. PTGDS may have an anti-apoptotic role in oligodendrocytes. It binds small non-substrate lipophilic molecules, including biliverdin, bilirubin, retinal, retinoic acid and thyroid hormone, and may act as a scavenger for harmful hydrophobic molecules and as a secretory retinoid and thyroid hormone transporter. It is likely to play important roles in both maturation and maintenance of the central nervous system and male reproductive system.

## References

1. Aebbersold R, *et al.* (1993) Identification of a brain-specific human cerebrospinal fluid glycoprotein, beta-trace protein. *Theor Electrophor.* 3:229-234.
2. Oliver K, *et al.* (2004) DNA sequence and analysis of human chromosome 9. *Nature.* 429:369-374.
3. Bonaldo MF, *et al.* (1997) Normalization and subtraction: two approaches to facilitate gene discovery. *Genome Res.* 6(9):791-806.

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