Data Sheet (Cat.No.TMPY-03120)

TargetMol

Prostaglandin D2 Synthase Protein, Human, Recombinant (His)

General Information

Synonyms:	PDS;L-PGDS;PGDS;PGDS2;LPGDS;PGD2;prostaglandin D2 synthase 21kDa (brain);PTGDS
Protein Construction:	A DNA sequence encoding the human PTGDS (P41222) (Met1-Gln190) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 23
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P41222
Molecular Weight:	20.1 kDa (predicted); 28 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 80 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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 PGH2 to PGD2. 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 hydrophopic 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.

Reference

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

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481