



Product Datasheet

Product Name	Beta Trace Human Recombinant
Cata No	CB500937
Source	<i>Escherichia Coli.</i>
Synonyms	Prostaglandin-H2 D-isomerase, EC 5.3.99.2, Lipocalin-type prostaglandin-D synthase, Glutathione-independent PGD synthetase, Prostaglandin-D2 synthase, PGD2 synthase, PGDS2, PGDS, Beta-trace protein, Cerebrin-28, PTGDS, PDS, BTP, Beta Trace.

Description

Beta-Trace catalyzes the conversion of PGH₂ to PGD₂, a prostaglandin involved in smooth muscle contraction/relaxation and a potent inhibitor of platelet aggregation. Involved in a variety of CNS functions, such as sedation, NREM sleep and PGE₂-induced allodynia, and may have an anti-apoptotic role in oligodendrocytes. 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. Possibly involved in development and maintenance of the blood-brain, blood-retina, blood-aqueous humor and blood-testis barrier. It is likely to play important roles in both maturation and maintenance of the central nervous system and male reproductive system. It has been proposed that the urinary and serum levels may provide a sensitive indicator of renal damage in diabetes mellitus and hypertension. Elevated levels in the coronary circulation may also be associated with angina. Changes in charge and molecular weight microheterogeneity, due to modification of the N-linked oligosaccharides, may be associated with neurodegenerative disease and multiple sclerosis. Detected in meningioma but not in other brain tumors and may be considered a specific cell marker for meningioma.

The Human PTGDS His-Tagged Recombinant Protein, produced in *E. coli*, is 20.3 kDa protein containing 168 amino acid residues of the human BTP and 14 additional amino acid residues - HisTag (underlined).

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Formulation

Filtered (0.4 micron) and lyophilized from 0.5 mg/ml in 20mM Tris buffer, 20mM NaCl, pH 7.5.

Reconstitution

It is recommended to reconstitute the lyophilized Beta-Trace in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized PGDS2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution PDS should be stored at 4°C between 2-7 days and for future use below -18°C.

For long term storage it is recommended to add a

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carrier protein (0.1% HSA or BSA).

Please prevent freeze-thaw cycles.

Sequence

MRGSHHHHHH GMASAPEAQV SVQPNFQQDK

FLGRWFSAGL ASNSSWLREK KAALSMCKSV

VAPATDGGLN LTSTFL **Product Data sheet**

AGSLGSYSYR SPHWGSTYSV SVVETDYDQY

ALLYSQGSKG PGEDFRMATL YSRTQTPRAE

LKEKFTAFCK AQQFTEDTIV FLPQTDKCMT EQ

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