Prostaglandin D Synthase Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: BTP, Prostaglandin-H2 D-isomerase, Lipocalin-Type Prostaglandin D Synthase, 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

Cat. No.:
RD172113100 (0.1 mg)

Description

Total 182 AA. MW: 20.3 kDa (calculated). N-Terminal His-tag, 14 extra AA (highlighted).

Introduction to the Molecule

BTP catalyzes the conversion of PGH2 to PGD2, a prostaglandin involved in smooth muscle contraction/re-laxation and a potent inhibitor of platelet aggregation. Involved in a variety of CNS functions like 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 hydrophopic 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 vital 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. IT is detected in meningioma but not in other brain tumors and may be considered a specific cell marker for meningioma.

Research topic

Neural tissue markers, Renal disease

Amino Acid Sequence

MRGSHHHHHH GMASAPEAQV SVQPNFQQDK FLGRWFSAGL ASNSSWLREK KAALSMCKSV VAPATDGGLN LTSTFLRKNQ CETRTMLLQP AGSLGSYSYR SPHWGSTYSV SVVETDYDQY ALLYSQGSKG PGEDFRMATL YSRTQTPRAE LKEKFTAFCK AQGFTEDTIV FLPQTDKCMT EQ

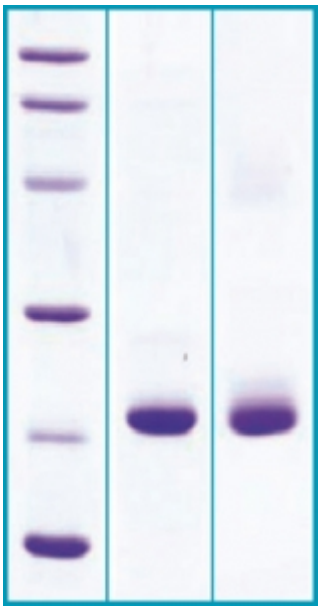
Source

E. coli

Purity

Purity as determined by densitometric image analysis: >95%

SDS-PAGE gel



12% SDS-PAGE separation of Human Beta-Trace protein
1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa
2. reduced and heated sample, 5µg/lane
3. non-reduced and non-heated sample, 5µg/lane

Endotoxin

<1.0 EU/µg

Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 20mM Tris buffer, 20mM NaCl, pH 7.5

Reconstitution

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after one week at 4°C.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.
LAL TEST to determine quantity of endotoxin.

Applications

Western blotting

Note

This product is intended for research use only.

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