Recombinant Human TFF3 Protein (His Tag)

Catalog Number: PDMH100075

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

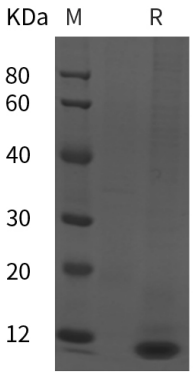
Description

Species	Human
Source	HEK293 Cells-derived Human TFF3 protein Met1-Phe80, with an C-terminal His
Calculated MW	8.7 kDa
Observed MW	12 kDa
Accession	Q07654
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Human TFF3 proteins, 2 μg/lane of Recombinant Human TFF3 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 12 kDa.

Background

Trefoil Factor 3 (TFF3), also known as Intestinal Trefoil Factor (ITF) and P1.B, is one of three structurally related secreted proteins that contain trefoil domains. These domains adopt a three-leaved conformation held together by conserved intrachain disulfide bonds. TFF3 is an approximately 7 kDa peptide that plays an important role in epithelial regeneration and wound healing. It can form disulfide-linked dimers or associate into disulfide-linked complexes with the intestinal mucous proteins FCGBP and MUC-2. TFF3 is expressed by epithelial goblet cells in the respiratory trac t, biliary and breast ducts, small and large intestine, and cardia of the stomach. Following secretion, TFF3 can be retained in the overlying mucous layer. TFF3 is also expressed by chondrocytes during bone development. Mature human TFF3 shares 76% amino acid sequence identity with mouse and rat TFF3. TFF3 is up-regulated in response to a range of gastrointestinal epithelial disruptions. It promotes epithelial wound healing by inducing the migration of biliary, bronchial, and intestinal epithelial cells. TFF3 up-regulation is associated with and enhances tumor cell invasion and metastasis. It supports hypoxia-induced VEGF up-regulation in tumor cells and also promotes angiogenesis in non-tumor environments. Over-expression of TFF3 in type 2 diabetic mouse liver has been shown to improve glucose tolerance and insulin sensitivity.

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