

Recombinant Human BCEI/PS2/TFF1 Protein

Catalog No.: RP01779 **Recombinant**

Sequence Information

| Species | Gene ID | Swiss Prot |
|---------|---------|------------|
| Human | 7031 | P04155 |

Tags

C-His

Synonyms

pS2; BCEI; HPS2; HP1.A; pNR-2; D21S21;TFF1

Product Information

| Source | Purification |
|--------------|--------------------|
| HEK293 cells | > 97% by SDS-PAGE. |

| Calculated MW | Observed MW |
|---------------|-------------|
| 7.54 kDa | 15 kDa |

Endotoxin
< 0.001 EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.


Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Trefoil Factor 1 (TFF1), also known as pS2, 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. TFF1 is an approximately 7 kDa peptide that plays an important role in epithelial regeneration and wound healing (1). Mature human TFF1 shares 67% amino acid sequence identity with mouse and rat TFF1. It is expressed by goblet cells of the gastric and intestinal mucosa and by conjunctival goblet cells (2-5). TFF1 is a copper-binding protein that can form disulfide-linked homodimers, associate into disulfide-linked complexes with Gastrokine 2, and form non-covalent complexes with the mucin MUC5AC (4, 6-8). Copper enhances TFF1 homodimerization as well as its ability to promote epithelial cell motility, wound healing, and the colonization of *H. pylori* in stomach and colon epithelia (9, 10). TFF1 is down-regulated during the progression from gastritis to gastric dysplasia to gastric cancer, although it is up-regulated in breast and prostate cancers (11-13). TFF1 inhibits the formation of calcium oxalate crystals, and its excretion in the urine is reduced in patients with kidney stones (14).

Basic Information

Description

Recombinant Human BCEI/PS2/TFF1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Glu25-Phe84) of human BCEI/PS2/TFF1 (Accession #NP_003216.1) fused with and a 6×His tag at the C-terminus.

Bio-Activity

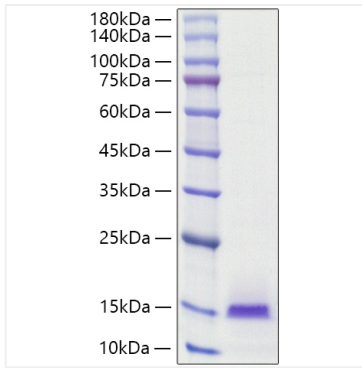
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human BCE1/PS2/TFF1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 17 kDa.