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## Product Data Sheet

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Product Name: TFF1 Human  
 Cat. No.: GP20935  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	TFF-1; TFF1; pS2; BCEI; HPS; HP1.A; pNR-2; D21S21; pS2 protein; Trefoil factor 1; Breast cancer estrogen-inducible protein.		
Amino Acid Sequence	EAQTETCTVAPRERQNCGFPGVTPSQCANKGCCFDDTVRGVPWCFYPNTIDVPPEEECEF.		
Solubility	It is recommended to reconstitute the lyophilized TFF1 in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The Human TFF1 protein was lyophilized from a 0.2μm filtered concentrated solution in 20mM PB, pH 7.4 and 150mM NaCl.		

### Introduction

The Trefoil Factor peptides (TFF1, TFF2 and TFF3) are stable secretory proteins expressed in the gastrointestinal tract (gastric mucosa), and are involved in intestinal mucosal defense and repair. TFF1 is an essential protein for normal differentiation of the antral and pyloric gastric mucosa and functions as a gastric-specific tumor suppressor gene. TFF1 is a stabilizer of the mucous gel overlying the gastrointestinal mucosa that provides a physical barrier against various noxious agents. TFF1 protects the mucosa from insults, stabilizes the mucus layer, & affects healing of the epithelium. TFF1 is commonly expressed in tumors. TFF1 is related with the cell membrane of MCF-7 cells. High levels of TFF1 and TFF2 are found in serum from inflammatory bowel disease.

### Biological Activity

The ED<sub>50</sub> as determined by a chemotaxis bioassay using human MCF-7 cells is less than 10μg/ml, corresponding to a specific activity of >100 IU/mg.

### Stability

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Lyophilized TFF1 although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution TFF1 should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

TFF-1 Human Recombinant produced in E.Coli is a homodimer, non-glycosylated, polypeptide chain containing 2 x 60 amino acids which includes a 40 amino acid trefoil motif containing 3 conserved intramolecular disulfide bonds and having a total molecular mass of 13.2 kDa. TFF-1 Human Recombinant is purified by proprietary chromatographic techniques.

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