

# Recombinant Human Trefoil Factor 1

Cat. No. TFF1-86H    Lot. No. (See product label)

## SPECIFICATION

### Product Overview

|                     |                                                                                                                                                                                                                                                                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Species             | Human                                                                                                                                                                                                                                                                                                                                        |
| Source              | E.coli                                                                                                                                                                                                                                                                                                                                       |
| Description         | Recombinant Human Trefoil Factor peptides (TFF1, TFF2 and TFF3) are expressed in the gastrointestinal tract, and appear to play an important role in intestinal mucosal defense and repair. TFF1 is essential for normal differentiation of the antral and pyloric gastric mucosa and functions as a gastric-specific tumor suppressor gene. |
| Molecular Weight    | 13.2 kDa homodimeric protein consisting of two 60 amino acid polypeptide chains, which includes a 40-amino acid trefoil motif containing three conserved intramolecular disulfide bonds.                                                                                                                                                     |
| Purity              | >97% by SDS-PAGE and HPLC analyses.                                                                                                                                                                                                                                                                                                          |
| Biological Activity | Fully biologically active when compared to standard.Determined by its ability to activate ERK1/2 (a MAPkinase signaling molecule) using a concentration 1.0-2.0 µg/ml.                                                                                                                                                                       |
| Physical Appearance | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                    |
| Formulation         | Lyophilized from a 0.2µm filtered concentrated (1.0mg/ml) solution in 20mM PB, pH 7.4, 150mM NaCl.                                                                                                                                                                                                                                           |

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|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>        | Less than 1EU/μg of rHuOTOR as determined by LAL method.                                                                                                                                                                                                                                                                                                                                       |
| <b>AA Sequence</b>      | EAQTETCTVA PRERQNCGFP GVTPSQCANK GCCFDDTVRG VPWCFYPNTI<br>DVPPEEECEF                                                                                                                                                                                                                                                                                                                           |
| <b>Reconstitution</b>   | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions.              |
| <b>Storage</b>          | This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.                                    |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Gene Name</b>        | TFF1 trefoil factor 1 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>         | TFF1; BCEI; D21S21; HP1.A; HPS2; pNR-2; pS2; trefoil factor 1; gastrointestinal trefoil protein pS2; breast cancer estrogen-inducible sequence; Breast cancer estrogen-inducible protein; breast cancer, estrogen-inducible sequence expressed in gastrointestinal trefoil protein pS2; pS2 protein; trefoil factor, BCE1, human pS2 induced by estrogen from human breast cancer cell line M. |
| <b>Gene ID</b>          | 7031                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>mRNA Refseq</b>      | NM_003225                                                                                                                                                                                                                                                                                                                                                                                      |

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|----------------------------|------------------------|
| <b>Protein Refseq</b>      | NP_003216              |
| <b>MIM</b>                 | 113710                 |
| <b>UniProt ID</b>          | P04155                 |
| <b>Chromosome Location</b> | 21q22.3                |
| <b>Function</b>            | growth factor activity |

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