



## Trefoil Factor 1 Human, Sheep Polyclonal Antibody

### Product Data Sheet

**Source of Antigen:** *E. coli*

**Host:** Sheep

**Cat. No.:**

RD184158100 (0.1 mg)

**Other names:** pS2 protein, HP1.A, Breast cancer estrogen-inducible protein, PNR-2, TFF1, Protein pS2, Polypeptide P1.A, hP1.A, BCEI, PS2

### Research topic

Energy metabolism and body weight regulation, Immune Response, Infection and Inflammation, Oncology, Sepsis

### Preparation

The antibody was raised in rabbits by immunization with the recombinant Human Trefoil Factor 1.

### Amino Acid Sequence

The immunization antigen (7.9 kDa - calculated) is a protein containing 70 AA of recombinant Human Trefoil Factor 1. N-Terminal His-tag, 10 extra AA (highlighted).

**MKHHHHHHAS** EAQTETCTVA PRERQNCGFP GVTPSQCAN K GCCFDDTVRG VPWCFYPNTI DVPPEEECEF

### Species Reactivity

Human

Not yet tested in other species.

### Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Human Trefoil Factor 1.

### Antibody Content

0.1 mg (determined by BCA method, BSA was used as a standard)

### Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE**.

### Reconstitution

Add 0.1 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

### Shipping

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

### Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

### Expiration

See vial label.

### Lot Number

See vial label.

### Quality Control Test

Indirect ELISA - to determine titer of the antibody

SDS PAGE - to determine purity of the antibody

## Applications

ELISA, Western blotting

## Introduction to the Molecule

Trefoil factor 1 (TFF1, pS2) is a small secreted protein with molecular weight of 6.5 kDa (monomers, 14 kDa - dimers). It belongs to the TFF protein family that is characterized by a clover leaf-like disulphide structure named the TFF domain, which is created by 6 cysteines forming three intramolecular bonds. TFF1 contains one trefoil domain, but has a seventh cysteine in position 57 that is essential for formation of dimers. TFF1 exist as both monomers and dimers (homo- and heterodimers - with gastrokine 2). The most abundant expression of TFF1 is found in the GI tract (especially in stomach, colon and pancreas) where it is co-localised with mucins, usually with MUC5AC. It is probable that TFF1 is closely connected with healing and stabilisation of the mucin layer. TFF1 was found in significant amounts in ulcer associated cell lineage UACL, where EGF (epidermal growth factor) is also present. The hypothesis that TFF1 expression is influenced by EGF has been proposed, and this has been supported by a study on EGF KO mice which had lower levels of TFF1. A study examining people with Crohn's disease and inflammatory bowel disease showed that TFF1 level in serum is increased during the inflammatory state. TFF1 is also highly expressed in the trachea and its level increases after administration of allergen, indicating that TFF1 could be associated with asthma. Another study found that TFF1 levels are high in septic patients and that the level correlates with prognosis of the septic state. High levels of TFF1 in serum were also found in patients with prostate and other types of cancer (breast, colon and ovarian tumors) but its prognostic value has not yet been proved. The exact function of TFF1 is not yet fully understood.

## Note

This product is for research use only.

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