



## Osteostat Human E. coli

### Product Data Sheet

**Type:** Recombinant

**Source:** E. coli

**Species:** Human

**Other names:** TNFSF18, AITR Ligand

**Cat. No.:**

RD172111100 (0.1 mg)

### Description

Total 139 AA. MW: 15.7 kDa (calculated). N-Terminal His-tag, 14AA (highlighted).

### Introduction to the Molecule

Osteostat is the cytokine that binds with TNFRSF18/AITR/GITR. It is important for interactions between activated T-lymphocytes and endothelial cells. It may modulate T-lymphocyte survival in peripheral tissues. Osteostat is expressed at high levels in the small intestine, ovary, testis, kidney and endothelial cells after stimulation by lipopolysaccharides.

Osteostat protein is present in human microvascular EC and is highly regulated by IFN-alpha and IFN-beta. Osteostat inhibits differentiation of osteoclasts from monocytic precursor cells. It suppresses the early stage of osteoclastogenesis via inhibition of macrophage factor-induced activator of NF-kappaB (RANK) expression in the osteoclast precursor cells. Osteostat does not inhibit lipopolysaccharide-induced RANK expression in monocytes and dendritic cells, or activation-induced RANK expression in T cells. Osteostat is a novel regulator of osteoclast generation and substantiates the endothelium in bone physiology.

### Research topic

Bone and cartilage metabolism

### Amino Acid Sequence

MRGSHHHHHH GMASTAKEPC MAKFGPLPSK WQMASSEPPC VNKVSDWKLE ILQNGLYLIY GQVAPNANYN DVAPFEVRLY  
KNKDMIQTLT NYSKIQNVGG TYELHVGDTI DLIFNSEHQV LKNNTYWGII LLANPQFIS

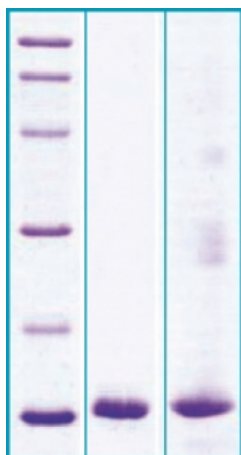
### Source

E. coli

### Purity

Purity as determined by densitometric image analysis: >95%

### SDS-PAGE gel



12% SDS-PAGE separation of Human Osteostat

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and heated sample, 5µg/lane

3. non-reduced and non-heated sample, 5µg/lane

### Endotoxin

< 1.0 EU/ug

**Formulation**

Filtered (0.4 µm) and lyophilized in 0.5 mg/mL in 0.05 M Acetate buffer pH=4.0

**Reconstitution**

Add 0.1M Acetate buffer pH4 to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10µg/mL. In higher concentrations the solubility of this antigen is limited. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

**Shipping**

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

**Storage, Stability/Shelf Life**

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after one week at 4°C.

**Quality Control Test**

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

**Applications**

Western blotting

**Note**

This product is intended for research use only.

**Gentaur Molecular Products**  
**Voortstraat 49**  
**1910 Kampenhout, Belgium**  
**<http://www.gentaur-worldwide.com>**