Osteostat Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: TNFS18, AITR Ligand

Cat. No.:
RD172111100 (0.1 mg)

Description

Total 139 AA. MW: 15.7 kDa (calculated). UniProtKB acc.no. Q9UNG2. N-Terminal His-tag, 14AA (highlighted).

Introduction to the Molecule

Osteostat is the cytokine that binds to TNFRSF18/AITR/GITR and is important for interactions between activated T-lymphocytes and endothelial cells and 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 detectable in human microvascular EC and is highly up-regulated by IFN-alpha and IFN-beta. Osteostat inhibit differentiation of osteoclasts from monocytic precursor cells. Osteostat suppresses the early stage of osteoclastogenesis via inhibition of macrophage colony-stimulating factor-induced receptor 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 substantiate the major role played by the endothelium in bone physiology.

Research topic

Bone and cartilage metabolism

Amino Acid Sequence

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

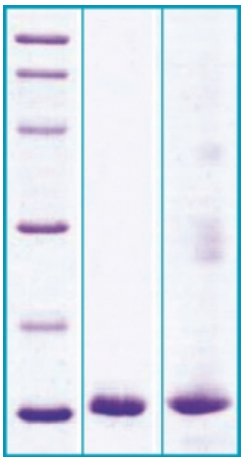
Source

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. Filter sterilize your culture media/working solutions containing this non-sterile product before using in 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.

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