



## AITRL, His Tag, human recombinant (rHuAITRL-His)

**Catalog No:** 94935  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Osteostat, TNFSF18, Activation-induced TNFR member Ligand, GITRL, TL6, AITRL, Glucocorticoid-induced TNF-related ligand, hGITRL, Tumor necrosis factor ligand superfamily member 18, MGC138237

### Background

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 inhibits 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 substantiates the major role played by the endothelium in bone physiology.

### Description

AITRL His tagged human recombinant protein, produced in *E. coli*, is 15.7 kDa (calculated) protein containing 125 amino acid residues of human AITRL and 14 additional amino acid residues – His Tag. The amino acid sequence of the human recombinant Osteostat is homologous to the extracellular domain of the human TNF18 (Thr53-Ser177).

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

Lyophilized from 0.5 mg/ml in 0.03 M acetate buffer, pH 4.

### Solubility

Add 0.2 ml of 0.1 M acetate buffer pH 4 and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10 µg/ml.

### Stability

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

### Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

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

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### Usage

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