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# Certificate of Analysis and Data Sheet Recombinant Human AITRL

**Catalog No.**  
228-10036

**Source:**  
*Escherichia 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.

### ***Introduction***

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.

### ***Description***

The Human AITRL His-Tagged Recombinant Protein, produced in E. coli, is 15.7 kDa (calculated) protein containing 125 amino acid residues of the human AITRL and 14 additional amino acid residues - HisTag (underlined). The amino acid sequence of the recombinant human 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 0.03M Acetate buffer, pH-4.

### ***Purity***

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### ***Solubility***

Add 0.2 ml of 0.1M 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 10µg/ml. In higher concentrations the solubility of this antigen is limited.

### ***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.**

### ***Amino Acid Sequence***

MRGSHHHHHH GMASTAKEPC MAKFGPLPSK WQMASSEPPC VNKVSDWKLE  
ILQNGLYLIY GQVAPNANYNDVAPFEVRLY KNKDMIQTLT NKSKIQNVGG  
TYELHVGDTI DLIFNSEHQV LKNNTYWGII LLANPQFIS.

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