

RANK L/TNFSF11 Protein, Human (HEK293, mFc)

Cat. No.:	HY-P73682
Synonyms:	Tumor necrosis factor ligand superfamily member 11; ODF; RANKL; CD254; TNFSF11
Species:	Human
Source:	HEK293
Accession:	O14788-2 (G63-D244)
Gene ID:	8600
Molecular Weight:	50-60 kDa

PROPERTIES

Biological Activity	<p>1. The bioactivity of hRANKL was determined by measuring the ability of hRANKL to induce TRAP activity in Raw 264.7 cells and the ED₅₀ is 16 ng/mL.</p> <p>2. Measured by its binding ability in a functional ELISA. Immobilized Human TNFRSF11B His at 2 µg/mL (100 µl/well) can bind Human RANKL mFc, the EC₅₀ of Human RANKL mFc is 15-80 ng/mL.</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>RANKL (TNFSF11) belongs to TNF family. RANKL is a type II transmembrane protein and is a receptor activator of NF-κB (RANK) ligand. RANKL is an activator of RANK. RANKL binds to RANK and induces the differentiation of monocyte/macrophage-lineage cells into osteoclasts and leads to osteoclast precursor maturation. In bone tissue, RANKL is expressed by osteoblasts, osteocytes and immune cells, especially in osteoblasts and osteocytes^[1]. RANKL is also expressed by T cells and increases proliferation and survival of dendritic cells^[2].</p> <p>Human RANKL shares 82.02% and 84.44% common aa identity with mouse and rat respectively. Human RANKL consists of cytoplasmic domain (1-47), helical domain (48-68), and extracellular domain (69-317). The soluble chain (140-317) is released when cleaved by enzymes such as matrix metalloproteinases (MMP3 or 7) and ADAM^{[1][3]}.</p> <p>RANKL is critical for osteoclasts maturation, bone modeling, and bone remodeling, as well as the development of lymph nodes (LNs)^[1].</p>
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REFERENCES

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