

Datasheet for ABIN1672814

## RANKL ELISA Kit



[Go to Product page](#)

1 Image 10 Publications

### Overview

Quantity:	96 tests
Target:	RANKL (TNFSF11)
Binding Specificity:	AA 72-316
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

### Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse TNFSF11/RANKL
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: R72-D316
Specificity:	Expression system for standard: NSO Immunogen sequence: R72-D316
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

## Target Details

Target:	RANKL (TNFSF11)
Alternative Name:	TNFSF11 ( <a href="#">TNFSF11 Products</a> )
Background:	<p>Protein Function: Cytokine that binds to TNFRSF11B/OPG and to TNFRSF11A/RANK. Osteoclast differentiation and activation factor. Augments the ability of dendritic cells to stimulate naive T-cell proliferation. May be an important regulator of interactions between T-cells and dendritic cells and may play a role in the regulation of the T-cell-dependent immune response. May also play an important role in enhanced bone-resorption in humoral hypercalcemia of malignancy.</p> <p>Background: Receptor activator of nuclear factor kappa-B ligand(RANKL), also known as tumor necrosis factor ligand superfamily member 11(TNFSF11), is a protein that in humans is encoded by the TNFSF11 gene. This gene encodes a member of the tumor necrosis factor(TNF) cytokine family which is a ligand for osteoprotegerin and functions as a key factor for osteoclast differentiation and activation. This gene is mapped to chromosome13q14.11. Targeted disruption of the related gene in mice led to severe osteopetrosis and a lack of osteoclasts. The deficient mice exhibited defects in early differentiation of T and B lymphocytes, and failed to form lobulo-alveolar mammary structures during pregnancy. This gene may play an important role in enhanced bone-resorption in humoral hypercalcemia of malignancy.</p> <p>Synonyms: Tumor necrosis factor ligand superfamily member 11,Osteoclast differentiation factor,ODF,Osteoprotegerin ligand,OPGL,Receptor activator of nuclear factor kappa-B ligand,RANKL,TNF-related activation-induced cytokine,TRANCE,CD254,Tumor necrosis factor ligand superfamily member 11, membrane form,Tumor necrosis factor ligand superfamily member 11, soluble form,Tnfsf11,Opgl, Rankl, Trance,</p> <p>Full Gene Name: Tumor necrosis factor ligand superfamily member 11</p> <p>Cellular Localisation: Isoform 1: Cell membrane, Single-pass type II membrane protein.</p>
Gene ID:	21943

## Target Details

UniProt:	<a href="#">O35235</a>
Pathways:	<a href="#">NF-kappaB Signaling</a>

## Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Tissue Specificity: Highly expressed in thymus and lymph nodes, but not in non-lymphoid tissues and is abundantly expressed in T- cells but not in B-cells. A high level expression is also seen in the trabecular bone and lung.
Plate:	Pre-coated
Protocol:	mouse TNFSF11 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for TNFSF11 has been precoated onto 96-well plates. Standards(NSO, R72-D316) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for TNFSF11 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse TNFSF11 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL,1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL mouse TNFSF11 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse TNFSF11 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(pg/ml): 535, Standard deviation: 18.2, CV(%): 3.4</li><li>• Sample 2: n=16, Mean(pg/ml): 1352, Standard deviation: 63.6, CV(%): 4.7</li><li>• Sample 3: n=16, Mean(pg/ml): 2366, Standard deviation: 132.5, CV(%): 5.6,</li><li>• Sample 1: n=24, Mean(pg/ml): 609, Standard deviation: 25, CV(%): 4.1</li><li>• Sample 2: n=24, Mean(pg/ml): 1233, Standard deviation: 72.75, CV(%): 5.9</li><li>• Sample 3: n=24, Mean(pg/ml): 2547, Standard deviation: 163.1, CV(%): 6.4</li></ul>
Restrictions:	For Research Use only

## Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

## Publications

Product cited in:

Wu, Wu, Li, Cong, Chen, Xu, Biswas, Liu, Xia, Li, Hu, Zhang, Habib, Zhang, Zou, Zhang, Zhang, Li: "Bone Size and Quality Regulation: Concerted Actions of mTOR in Mesenchymal Stromal Cells and Osteoclasts." in: **Stem cell reports**, Vol. 8, Issue 6, pp. 1600-1616, (2017) ([PubMed](#)).

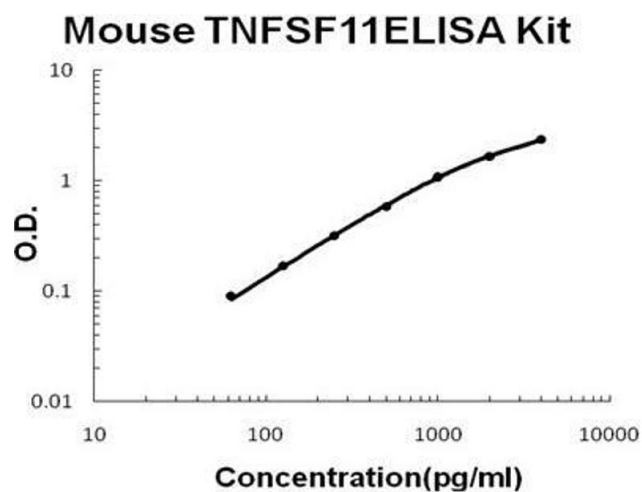
Guo, Li, Wu, Jing, Huang, Zhang, Xiang, Ren, Lv, Xiao, Guo: "Meclizine Prevents Ovariectomy-Induced Bone Loss and Inhibits Osteoclastogenesis Partially by Upregulating PXR." in: **Frontiers in pharmacology**, Vol. 8, pp. 693, (2017) ([PubMed](#)).

Zhao, Cai, Wang, Zhao, Li, Liu, Guan, Zhu, Xiao: "Dihydromyricetin Protects against Bone Loss in Ovariectomized Mice by Suppressing Osteoclast Activity." in: **Frontiers in pharmacology**, Vol. 8, pp. 928, (2017) ([PubMed](#)).

Zhang, Guan, Li, Fang, Chen, Li: "Amlexanox Suppresses Osteoclastogenesis and Prevents Ovariectomy-Induced Bone Loss." in: **Scientific reports**, Vol. 5, pp. 13575, (2016) ([PubMed](#)).

Montesi, Panseri, Lafisco, Adamiano, Tampieri: "Coupling Hydroxyapatite Nanocrystals with Lactoferrin as a Promising Strategy to Fine Regulate Bone Homeostasis." in: **PLoS ONE**, Vol. 10, Issue 7, pp. e0132633, (2015) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



ELISA

**Image 1.** Mouse TNFSF11/RANKL PicoKine ELISA Kit standard curve