

#4816 Store at -20C

## RANK Ligand (L300) Antibody



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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Transfected Only	35-45	Rabbit	#O14788	8600

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

RANK Ligand (L300) Antibody detects transfected levels of cellular RANK Ligand protein.

### Species predicted to react based on 100% sequence homology:

Rat, Monkey, Bovine, Pig

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxyl terminus of human RANK Ligand. Antibody was purified by protein A and peptide affinity chromatography.

## Background

RANK (receptor activator of NF- $\kappa$ B) is a member of the tumor necrosis factor (TNF) receptor subfamily that is activated by its ligand, RANKL (TRANCE/OPGL/ODF), to promote survival of dendritic cells and differentiation of osteoclasts (1-4). Although RANK is widely expressed, its cell surface expression may be more restricted to dendritic cells and foreskin fibroblasts (1). RANK contains a 383-amino acid intracellular domain that associates with specific members of the TRAF family to NF- $\kappa$ B and JNK activation (1,5). RANKL/RANK signaling may also lead to survival signaling through activation of the Akt pathway and an upregulation of survival proteins, including Bcl-xL (2,6). RANK signaling has been implicated as a potential therapeutic to inhibit bone loss and arthritis (7,8).

RANKL (1), also named TNF-related activation-induced cytokine (TRANCE) (2,9), osteoprotegerin ligand (OPGL) (3), osteoclast differentiation factor (ODF) (4), and TNFSF11, is a type II transmembrane protein of the TNF family that exists as both a membrane-bound and soluble form. It is an essential regulator of immune function and bone development and homeostasis (7,10,11). RANKL is predominately expressed in activated T cells, as well as the thymus, lymph node, and bone marrow and promotes dendritic cell survival. Deletion of RANKL in mice leads to severe osteoporosis with a loss of osteoclasts, defects in T and B cell differentiation, loss of lymph node development, and mammary gland development during pregnancy (12-14).

## Background References

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## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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