

#4816 Store at -20°C

# RANK Ligand (L300) Antibody

100 µl  
(10 western blots)



**Orders** ■ 877-616-CELL (2355)  
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This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.

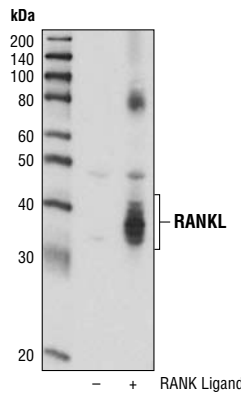
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, (Mk, Pg, B)	35-45 kDa	Rabbit**

**Background:** RANK (receptor activator of NF-κB) 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-κB 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).

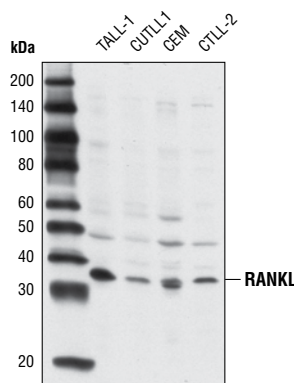
RANKL (1), also named TNF-related activation-induced cytokine (TRANCE) (2,9), osteoprotegerin ligand (OPGL) (3), osteoclast differentiation factor (ODF) (4), and TNFSF11, is a type II transmembrane protein of the TNF family that exists as both a membrane-bound and soluble form. It is an essential regulator 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).

**Specificity/Sensitivity:** RANK Ligand (L300) Antibody detects endogenous levels of RANK Ligand. The antibody is predicted to detect soluble RANK Ligand.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues near the carboxyl terminus of human RANK Ligand. Antibody was purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from COS-7 cells, untransfected (-) or transfected with a construct expressing RANK Ligand, using RANK Ligand (L300) Antibody.



Western blot analysis of extracts from various cell lines using RANK Ligand (L300) Antibody.

Entrez-Gene ID #8600  
Swiss-Prot Acc. #O14788

**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.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at [www.cellsignaling.com](http://www.cellsignaling.com).

Please visit [www.cellsignaling.com](http://www.cellsignaling.com) for a complete listing of recommended companion products.

**Background References:**

- (1) Anderson, D.M. et al. (1997) *Nature* 390, 175-9.
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- (3) Lacey, D.L. et al. (1998) *Cell* 93, 165-76.
- (4) Yasuda, H. et al. (1998) *Proc. Natl. Acad. Sci. USA* 95, 3597-602.
- (5) Darnay, B.G. et al. (1998) *J. Biol. Chem.* 273, 20551-5.
- (6) Wong, B.R. et al. (1999) *Mol. Cell* 4, 1041-9.
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- (8) Nakashima, T. et al. (2003) *Curr. Opin. Rheumatol.* 15, 280-7.
- (9) Wong, B.R. et al. (1997) *J Biol Chem* 272, 25190-4.
- (10) Hofbauer, L.C. (1999) *Eur J Endocrinol* 141, 195-210.
- (11) Theill, L.E. et al. (2002) *Annu Rev Immunol* 20, 795-823.
- (12) Mizuno, A. et al. (1998) *Biochem Biophys Res Commun* 247, 610-5.
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- (14) Fata, J.E. et al. (2000) *Cell* 103, 41-50.

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

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.