

#3959 Store at -20°C

RANK Ligand (R2) Antibody



Orders: 877-616-CELL (2355)
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Web: info@cellsignal.com
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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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 (R2) Antibody detects transfected levels of cellular RANK Ligand protein.

Species predicted to react based on 100% sequence homology:

Monkey, Bovine, Pig

Source / Purification

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

Background

RANK (receptor activator of NF- κ 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- κ 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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7. Walsh, M.C. and Choi, Y. *Cytokine Growth Factor Rev.* 14, 251-63.
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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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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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