

sRANK Ligand Antibody

Catalog # ASC10470

Product Information

Application	WB, E, IHC-P
Primary Accession	O14788
Other Accession	NP_003692 , 4507595
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	35478
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	sRANK-L antibody can be used for detection of sRANK-L by Western blot at 0.25 - 0.5 μ g/mL. Antibody can also be used for immunohistochemistry starting at 5 μ g/mL.

Additional Information

Gene ID	8600
Other Names	sRANK Ligand Antibody: ODF, OPGL, sOdf, CD254, OPTB2, RANKL, TRANCE, hRANKL2, Tumor necrosis factor ligand superfamily member 11, Osteoclast differentiation factor, ODF, tumor necrosis factor (ligand) superfamily, member 11
Target/Specificity	TNFSF11;
Reconstitution & Storage	sRANK Ligand antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	sRANK Ligand Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TNFSF11 (HGNC:11926)
Synonyms	OPGL, RANKL, TRANCE
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 (PubMed:[22664871](#)). Induces osteoclastogenesis by activating multiple signaling pathways in osteoclast precursor cells, chief among which is induction of long lasting oscillations in the intracellular concentration of Ca (2+) resulting in the activation of NFATC1, which translocates to the nucleus and induces osteoclast-specific gene transcription to allow differentiation of osteoclasts. During osteoclast differentiation, in a TMEM64 and ATP2A2-dependent manner induces activation of CREB1 and mitochondrial ROS generation necessary for proper osteoclast generation (By similarity).

Cellular Location	[Isoform 1]: Cell membrane; Single-pass type II membrane protein [Isoform 2]: Cytoplasm.
Tissue Location	Highest in the peripheral lymph nodes, weak in spleen, peripheral blood Leukocytes, bone marrow, heart, placenta, skeletal muscle, stomach and thyroid

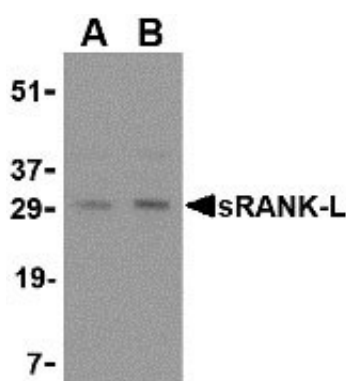
Background

sRANK Ligand Antibody: The receptor activator of NF- κ B ligand (RANK-L) is a recently discovered member of the TNF-ligand family involved in the regulation of the T cell-dependent immune response, lymph node organogenesis and bone formation. RANK-L exists as both a normal, transmembrane form and a truncated, soluble form (sRANK-L), both of which can stimulate the receptor. Activation of T cells, such as by treatment with interleukin-7, induces RANK-L production and leads to an increase of osteoclast formation and bone loss. Finally, sRANK-L can activate the antiapoptotic kinase Akt through a signaling complex involving Src kinase and TRAF6, suggesting sRANK-L may also play a role in regulating apoptosis. This antibody will recognize both the soluble form and the uncleaved transmembrane form of RANK-L.

References

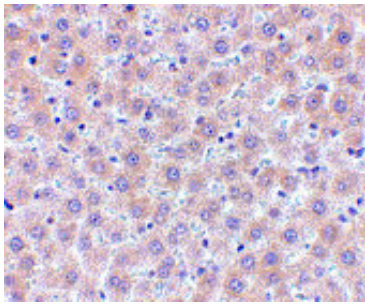
- Wong BR, Rho J, Arron J, et al. TRANCE is a novel ligand of the tumor necrosis factor receptor family that activates c-Jun N-terminal kinase in T cells. *J. Biol. Chem.* 1997; 272:25190-4.
- Kong YY, Yoshida H, Sarosi I, et al. OPGL is a key regulator of osteoclastogenesis, lymphocyte development and lymph-node organogenesis. *Nature* 1999; 397:315-23.
- Weitzmann MN, Cenci S, Rifas L, et al. Interleukin-7 stimulates osteoclast formation by up-regulating the T-cell production of soluble osteoclastogenic cytokines. *Blood* 2000; 96:1873-8.
- Bharti AC, Takada Y, Shishodia S, et al. Evidence that receptor activator of the nuclear factor (NF)-kappaB ligand can suppress cell proliferation and induce apoptosis through activation of a NF-kappaB-independent and TRAF6-dependent mechanism. *J. Biol. Chem.* 2004; 279:6065-76.

Images



Western blot analysis of sRANK-L in rat liver tissue lysate with sRANK-L antibody at (A) 0.25 and (B) 0.5 µg/mL.

Immunohistochemistry of sRANK-L in human liver tissue



with sRANK-L antibody at 5 µg/mL.

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