

## sRANK Ligand Antibody Catalog # ASC10470

### Specification

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#### sRANK Ligand Antibody - Product Information

Application	WB, IHC
Primary Accession	<a href="#">O14788</a>
Other Accession	<a href="#">NP_003692</a> , <a href="#">4507595</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	35 kDa KDa
Application Notes	sRANK-L antibody can be used for detection of sRANK-L by Western blot at 0.25 - 0.5 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL.

#### sRANK Ligand Antibody - 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.

#### sRANK Ligand Antibody - Protein Information

Name TNFSF11

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:<a href="http://www.uniprot.org/citations/22664871" target="\_blank">22664871</a>). 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

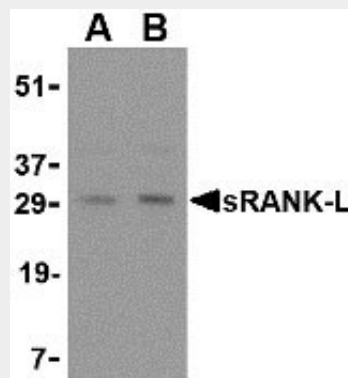
Highest in the peripheral lymph nodes, weak in spleen, peripheral blood Leukocytes, bone marrow, heart, placenta, skeletal muscle, stomach and thyroid

### sRANK Ligand Antibody - Protocols

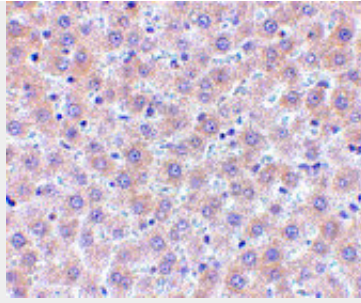
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### sRANK Ligand Antibody - 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.

### **sRANK Ligand Antibody - Background**

**sRANK Ligand Antibody:** The receptor activator of NF- $\kappa$ 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.

### **sRANK Ligand Antibody - 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)- $\kappa$ B ligand can suppress cell proliferation and induce apoptosis through activation of a NF- $\kappa$ B-independent and TRAF6-dependent mechanism. *J. Biol. Chem.* 2004; 279:6065-76.