

**DESCRIPTION**

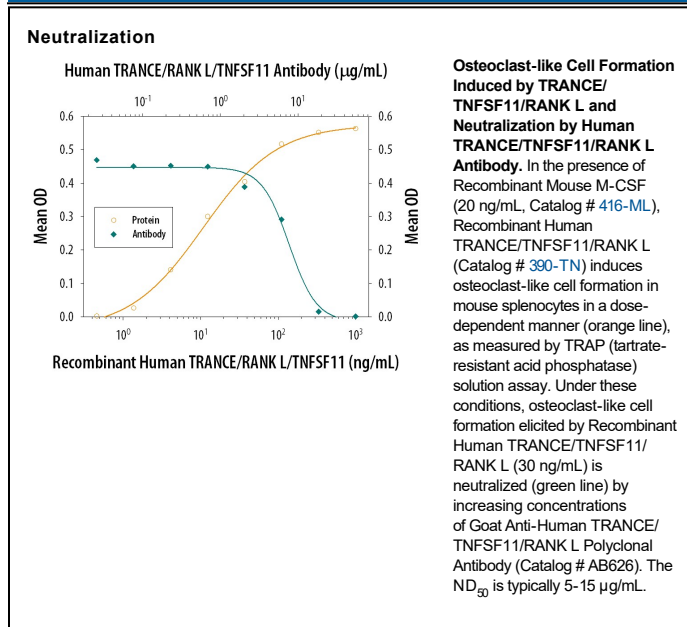
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects TRANCE/TNFSF11/RANK L in direct ELISAs and Western blots. In direct ELISAs, approximately 30% cross-reactivity with recombinant mouse TRANCE is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Protein A or G purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human TRANCE/TNFSF11/RANK L Gln73-Asp317 (Ala194Gly) Accession # O14788
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	Recombinant Human TRANCE/TNFSF11/RANK L (Truncated) (Catalog # 390-TN)
<b>Neutralization</b>		Measured by its ability to neutralize TRANCE/TNFSF11/RANK L-induced osteoclast-like cell formation in mouse splenocytes. Nakagawa, N. <i>et al.</i> (1998) <i>Biochim. Biophys. Res. Commun.</i> <b>253</b> :395. The Neutralization Dose (ND <sub>50</sub> ) is typically 5-15 µg/mL in the presence of 30 ng/mL Recombinant Human TRANCE/TNFSF11/RANK L.

**DATA**



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 1 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

RANK Ligand (receptor activator of NF- $\kappa$ B ligand [RANKL], also called TNF-related activation-induced cytokines (TRANCE), osteoprotegerin ligand [OPGL], and osteoclast differentiation factor [ODF]), is a member of the tumor necrosis factor (TNF) family. RANK Ligand was originally identified as an immediate early gene upregulated by T cell receptor stimulation. The human RANK Ligand cDNA encodes a type II transmembrane protein of 317 amino acids with a predicted cytoplasmic domain of 47 amino acids, a 21 amino acids transmembrane region, and an extracellular domain of 249 amino acids. The extracellular domain contains two potential N-linked glycosylation sites. Mouse and human RANK Ligand share 85% amino acid identity. RANK Ligand is primarily expressed in T cells and T cell rich organs, such as thymus and lymph nodes. The multi-functions of RANK Ligand include induction of activation of the c-jun N-terminal kinase, enhancement of T cell growth and dendritic cell function, induction of osteoclastogenesis, and lymph node organogenesis. RANK is the cell surface signaling receptor of RANK Ligand. RANK has been shown to undergo receptor clustering during signal transduction. Osteoprotegerin, a soluble member of the TNF receptor family which binds RANK Ligand, is a naturally occurring decoy receptor that counterbalances the effects of RANK Ligand.

#### References:

1. Wong, B.R. *et al.* (1997) *J. Biol. Chem.* **272**:25190.
2. Anderson, D.M. *et al.* (1997) *Nature* **390**:175.
3. Nakagawa, N. *et al.* (1998) *Biochem. Biophys. Res. Commun.* **245**:382.
4. Kong, Y-Y. *et al.* (1999) *Nature* **397**:315.