

RANK-L (Receptor Activator for Nuclear Factor B Ligand)

Analyte: RANK-L

Specimen Type: Serum

Optimum Volume: 0.5 mL

2-8°C **-20°C** **-70°C**

5 days 26 days TBD

Reporting units: pmol/L

Method: ELISA

Biological or Clinical Significance:

sRANKL, receptor activator of nuclear factor (NF)- κ B ligand (also: osteoprotegerin ligand, OPG), is a part of the TNF superfamily with high similarity to other members of that protein species. RANKL, RANK, and osteoprotegerin (OPG) have been identified as the key molecular regulation system for bone remodeling. RANKL is the main stimulatory factor for the formation of mature osteoclasts and is essential for their survival. Therefore, an increase in RANKL expression leads to bone resorption and bone loss. RANKL is produced by osteoblastic lineage cells and activated T lymphocytes. It activates its specific receptor RANK, which is located on osteoclasts and dendritic cells. The effects of RANKL are counteracted by OPG, which is secreted by various tissues and acts as an endogenous soluble receptor antagonist. Imbalances of the RANKL/OPG system have been related to the pathogenesis of Paget's disease, benign and malignant bone tumors, postmenopausal osteoporosis, rheumatoid arthritis, bone metastases and hypercalcemia.

Principle of Test Method:

The RANKL assay is a solid-phase ELISA that employs the quantitative sandwich enzyme immunoassay principle.