

# Technical Information

## free sRANKL

free soluble receptor activator of nuclear factor kappa B ligand

Cat. No.:	BI-20462
Tests:	96
Method:	<b>ELISA</b>
Range:	0 – 2 pmol/l
LLOQ:	0.008 pmol/l (STD2 0.0625 pmol/l)
Incubation time:	2h / o.n. / 1h / 30min
Sample volume:	150 µl
Sample type:	Serum, heparin plasma
Sample preparation:	Centrifuge freshly collected blood as soon as possible Store centrifuged samples at -20°C for longer storage. Samples are stable up to 3 freeze and thaw cycles. Hemolyzed or lipemic samples may cause erroneous results.
Reference values:	Median serum (n=32): 0.14 pmol/l Median heparin plasma (n=22): 0.17 pmol/l
Species:	Human

### Intended use:

RANKL, the receptor activator of nuclear factor kappa B ligand, a member of the tumor necrosis factor (TNF) family (<http://www.uniprot.org/uniprot/O14788>), is the main stimulatory factor for the formation of mature osteoclasts and is essential for their survival. RANKL activates its specific receptor RANK, located on osteoclasts and dendritic cells. The effects are counteracted by OPG which acts as an endogenous soluble receptor antagonist (see: BI-20403 – OPG ELISA).

The major source of RANKL are osteocytes, former osteoblasts that become embedded within the mineralized bone matrix. RANKL is a ~35 kD type II transmembrane-type protein and is cleaved to release a soluble biologically active product that forms a homotrimer.

RANKL and its specific receptor RANK are not only key regulators of bone remodeling but also play an essential role in immunobiology, e.g. lymph node formation, establishment of the thymic microenvironment, mammary gland development during pregnancy, bone metastasis in cancer and sex-hormone, progesterin-driven breast cancer, thermoregulation, and finally in the development of type 2 diabetes mellitus.

Intended applications:

- Postmenopausal and senile osteoporosis
- Glucocorticoid induced osteoporosis
- Disease with locally increased resorption activity
- Arthritis
- Oncology
- Type 2 diabetes mellitus

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