RANKL Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	RANKL, Blocking Peptide
Full Product Name	RANKL Blocking Peptide
Product Gene Name	RANKL blocking peptide
Product Synonym Names	CD254; hRANKL2; ODF; OPGL; OPTB2; Osteoclast differentiation factor; Osteoprotegerin ligand; RANKL; Receptor activator of nuclear factor kappa B ligand; Receptor activator of nuclear factor kappa-B ligand; sOdf; TNF related activation induced cytokine; TNF-related activation-induced cytokine; TNF11_HUMAN; TNFSF 11; Tnfsf11; TRANCE; Tumor necrosis factor (ligand) superfamily member 11; Tumor necrosis factor ligand superfamily member 11; Tumor necrosis factor ligand superfamily member 11, soluble form
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	RANKL peptide (MBS9614801) is used for blocking the activity of RANKL antibody (MBS9600248)
Molecular Weight	35,478 Da
Chromosome Location	Chromosome: 13; NC_000013.10 (43136872..43182149). Location: 13q14
OMIM	259710
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for RANKL blocking peptide	Blocking/Control
Related Product Information for RANKL blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of RANKL blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for RANKL purchase	MBS9614801 is a blocking peptide targeting RANKL.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RANKL. It may not necessarily be applicable to this product.

NCBI GI #	4507595
NCBI GeneID	8600
NCBI Accession #	NP_003692.1

UniProt Primary Accession #	O14788
UniProt Secondary Accession #	O14723; Q96Q17; Q9P2Q3
UniProt Related Accession #	O14788
GenBank Nucleotide #	NM_003701.3
NCBI Official Full Name	tumor necrosis factor ligand superfamily member 11 isoform 1
NCBI Official Synonym Full Names	tumor necrosis factor (ligand) superfamily, member 11
NCBI Official Symbol	TNFSF11
NCBI Official Synonym Symbols	ODF; OPGL; sOdf; CD254; OPTB2; RANKL; TRANCE; hRANKL2
UniProt Protein Name	Tumor necrosis factor ligand superfamily member 11
UniProt Synonym Protein Names	Osteoclast differentiation factor; ODF; Osteoprotegerin ligand; OPGL; Receptor activator of nuclear factor kappa-B ligand; RANKL; TNF-related activation-induced cytokine
Protein Family	Tumor necrosis factor ligand superfamily
UniProt Gene Name	TNFSF11
UniProt Synonym Gene Names	OPGL; RANKL; TRANCE; ODF; OPGL; RANKL; TRANCE
UniProt Entry Name	TNF11_HUMAN
NCBI Protein Information	tumor necrosis factor ligand superfamily member 11; osteoprotegerin ligand; osteoclast differentiation factor; TNF-related activation-induced cytokine; receptor activator of nuclear factor kappa B ligand; receptor activator of nuclear factor kappa-B ligan
NCBI Summary for RANKL	This gene encodes a member of the tumor necrosis factor (TNF) cytokine family which is a ligand for osteoprotegerin and functions as a key factor for osteoclast differentiation and activation. This protein was shown to be a dentritic cell survival factor and is involved in the regulation of T cell-dependent immune response. T cell activation was reported to induce expression of this gene and lead to an increase of osteoclastogenesis and bone loss. This protein was shown to activate antiapoptotic kinase AKT/PKB through a signaling complex involving SRC kinase and tumor necrosis factor receptor-associated factor (TRAF) 6, which indicated this protein may have a role in the regulation of cell apoptosis. Targeted disruption of the related gene in mice led to severe osteopetrosis and a lack of osteoclasts. The deficient mice exhibited defects in early differentiation of T and B lymphocytes, and failed to form lobulo-alveolar mammary structures during pregnancy. Two alternatively spliced transcript variants have been found. [provided by RefSeq, Jul 2008]

UniProt Comments for RANKL	TNFSF11: 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. Homotrimer. Up-regulated by T-cell receptor stimulation. Highest in the peripheral lymph nodes, weak in spleen, peripheral blood Leukocytes, bone marrow, heart, placenta, skeletal muscle, stomach and thyroid. Belongs to the tumor necrosis factor family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral Chromosomal Location of Human Ortholog: 13q14 Cellular Component: extracellular space; integral to plasma membrane; cytoplasm; extracellular region Molecular Function: cytokine activity; tumor necrosis factor receptor superfamily binding; tumor necrosis factor receptor binding Biological Process: ossification; positive regulation of I-kappaB kinase/NF-kappaB cascade; positive regulation of osteoclast differentiation; cytokine and chemokine mediated signaling pathway; mammary gland epithelial cell proliferation; osteoclast differentiation; activation of JNK activity; positive regulation of homotypic cell-cell adhesion; positive regulation of corticotropin-releasing hormone secretion; activation of NF-kappaB transcription factor; calcium ion homeostasis; positive regulation of protein kinase B signaling cascade; positive regulation of MAP kinase activity; monocyte chemotaxis; organ morphogenesis; tumor necrosis factor-mediated signaling pathway; positive regulation of bone resorption; positive regulation of transcription factor activity; immune response; positive regulation of transcription from RNA polymerase II promoter; positive regulation of T cell activation; protein homooligomerization; bone resorption Disease: Osteopetrosis, Autosomal Recessive 2
Research Articles on RANKL	**1.** genetic variant in the RANKL locus influences cortical vBMD, at least partly, via effects on cortical porosity.
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