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Datasheet for 010-001-C22

rMouse RANKL Protein

Overview

Description:	RANKL Mouse Recombinant Protein - 010-001-C22
Item No.:	010-001-C22
Size:	10 µg
Applications:	SDS-PAGE
Origin:	Mouse
Expressed in:	E. coli

Product Details

Background:	The secreted cytokine RANKL (Receptor Activator of Nuclear factor kappa-B Ligand) is critically involved in osteoclastic differentiation and activation and in the regulation of specific immunity. RANKL exists as a homotrimer, is glycosylated, and occurs in 3 forms: cell-bound RANKL, which is expressed by osteoblast lineage cells, soluble RANKL (sRANKL), which is expressed by activated T lymphocytes, and a truncated ectodomain form derived from the cell-bound RANK Ligand, which is enzymatically processed by TACE (TNF-alpha converting enzyme (TACE; ADAM-17)). All three forms stimulate their specific receptor, RANK, which is located on osteoclastic and dendritic cells. RANKL binds to TNFRSF11B/OPG and to TNFRSF11A/RANK. RANKL augments the ability of dendritic cells to stimulate naive T-cell proliferation. It 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. It may also play an important role in enhanced bone-resorption in humoral hypercalcemia of malignancy. Deficiency in Tnfsf11 results in failure to form lobulo-alveolar mammary structures during pregnancy, resulting in death of newborns. Trance-deficient mice show severe osteopetrosis. RANKL is highly expressed in thymus and lymph nodes, but not in non-lymphoid tissues and is abundantly expressed in T-cells but not in B-cells. A high level expression is also seen in the trabecular bone and lung. Recombinant Mouse soluble RANKL is approximately 19.9 kDa and contains 174 amino acids.
Synonyms:	TNF-related activation-induced cytokine, TRANCE, Tumor necrosis factor ligand superfamily member 11, TNFRSF11, Osteoprotegerin ligand, OPG, Osteoclast differentiation factor, ODF, CD254
Species of Origin:	Mouse
Expressed in:	E. coli
Type:	Recombinant Protein

Low Endotoxin:	Yes

Target Details

Gene Name:	Tnfsf11
Purity/Specificity:	Purity was determined to be greater than 95% as determined by analysis by RP-HPLC and by reducing and non-reducing SDS-PAGE.
Relevant Links:	• NCBI • UniProtKB - O35235

Application Details

Tested Applications:	SDS-PAGE
Application Note:	RANKL protein has been tested by SDS-PAGE and is suitable as a control for polyclonal or monoclonal anti-RANKL in immunological assays. Formulation of buffer: 10mM Sodium Phosphate, 20mM Sodium Chloride, pH: 7.5.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
Other:	Biological Activity: Mouse RANKL has full biological activity when compared to a standard. The ED50, as measured by the dose-dependent induction of TNF-a production in RAW 264.7 cells, is 50 ng/ml. Endotoxin Level: Measured by LAL is 0.148 EU/µg protein.

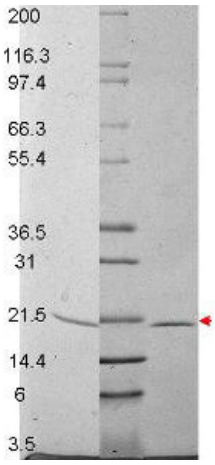
Formulation

Physical State:	Lyophilized
Concentration:	0.1 mg/mL by UV absorbance at 280 nm
Buffer:	See application note.
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at -20° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE
SDS-PAGE shows band corresponding to RANKL (1µg) in lane 1 (unreduced) and lane 3 (reduced, arrowhead). Molecular weight estimation was made by comparison to prestained MW markers, lane 2.

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