Cytokines

Mouse Recombinant RANKL, ACF

Receptor activator of nuclear factor kappa-B ligand, animal component-free

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Catalog #100-0943	100 µg
100-0944	1000 µg

Product Description

Receptor activator of nuclear factor kappa-B ligand (RANKL) is a member of the tumor necrosis factor (TNF) superfamily (Anderson et al.). Cytokines in the TNF superfamily are involved in a variety of long-term cellular activities such as differentiation, proliferation, and cell death (MacEwan). RANKL is a type II homotrimeric transmembrane protein expressed in both a membrane-bound and secreted form (Ikeda et al.). RANKL binds to the receptor activator of nuclear factor kappa-B (RANK). Upon binding to its receptor, RANKL activates the AKT signaling pathway (Moon et al.). Osteoprotegerin (OPG) may also bind RANKL, and this binding competes with RANKL-RANK binding (Lacey et al.). RANKL is involved in osteoclastogenesis (Lacey et al.; Yasuda et al.) and T cell activation (Wong et al.). This product is animal component-free.

Product Information

Alternative Names:	CD254, hRANKL2, ODF, OPGL, OPTB2, Osteoclast differentiation factor, soluble Receptor activator of NF-κB ligand, sOdf, TNF-related activation-induced cytokine, TNFSF11, TNF superfamily member 11, TNLG6B, Tumor necrosis factor superfamily member 11, TRAN
Accession Number:	O35235 (Pro143-Asp316) was expressed with an additional Met
Amino Acid Sequence:	MPAMMEGSWLD VAQRGKPEAQ PFAHLTINAA SIPSGSHKVT LSSWYHDRGW AKISNMTLSN GKLRVNQDGF YYLYANICFR HHETSGSVPT DYLQLMVYVV KTSIKIPSSH NLMKGGSTKN WSGNSEFHFY SINVGGFFKL RAGEEISIQV SNPSLLDPDQ DATYFGAFKV QDID
Predicted Molecular Mass:	19.5 kDa
Species:	Mouse
Formulation:	Lyophilized from a sterile-filtered aqueous solution containing 10 mM sodium phosphate and 50 mM sodium chloride, pH 7.5.
Source:	*E. coli*

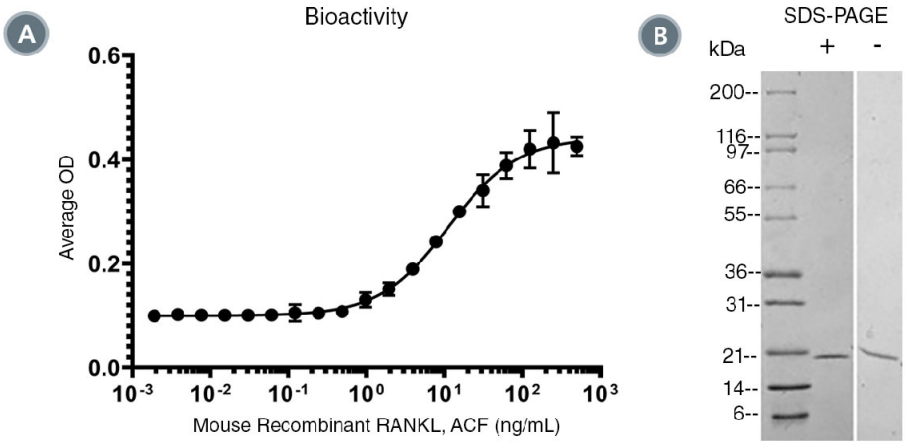
Specifications

Activity:	The EC50 of Mouse Recombinant RANKL, ACF is ≤ 50 ng/mL as determined by activity of RAW-Blue™ cells.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1.0 EU/µg protein.

Preparation and Storage

Storage:	Store at -20°C to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The activity of Mouse Recombinant RANKL, ACF was tested by its ability to activate RAW-Blue™ cells. The EC50 is defined as the effective concentration of the growth factor at which binding is at 50% of maximum. The EC50 in the above example is 11.3 ng/mL.

(B) Mouse Recombinant RANKL, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant RANKL, ACF has a predicted molecular mass of 19.5 kDa (monomer).

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

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Moon JB et al. (2012) Akt induces osteoclast differentiation through regulating the GSK3β/NFATc1 signaling cascade. J Immunol 188(1): 163–9.

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