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Human Recombinant RANKL, ACF

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

Catalog #78215	10 µg
Catalog #78215.1	100 µg
Catalog #78215.2	500 µg
Catalog #78215.3	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 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 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 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, TRANCE

Accession Number: O14788

Amino Acid Sequence: EKAMVDGSWL DLAKRSKLEA QPFAHLTINA TDIPSGSHKV SLSSWYHDRG WAKISNMTFS NGKLIVNQDG FYYLYANICF RHHETSGDLA TEYLQLMVYV TKTSIKIPSS HTLMKGGSTK YWSGNSEFHF YSINVGGFFK LRSGEEISIE VSNPSLLDPD QDATYFGAFK VRDID

Predicted Molecular Mass: 19.7 kDa

Species: Human

Product Formulation: Lyophilized from a sterile-filtered solution containing sodium phosphate, pH 7.5.

Source: E. coli

Purity: ≥ 95%

Specifications

Activity: The specific activity is ≥ 2 x 10^4 units/mg (EC50 ≤ 50 ng/mL) as determined by the ability to induce bioluminescence in engineered RANKL bioassay cells.

Endotoxin Level: Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Stability and Storage: Store at -20 to -80°C. 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.
OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. 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 -20 to -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data

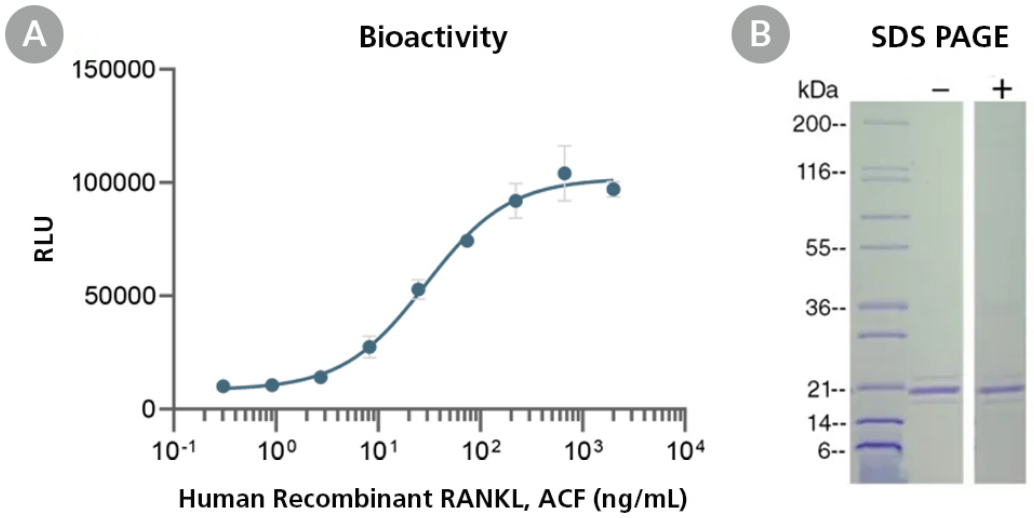

Figure 1. Biological Activity of RANKL, ACF

(A) Biological activity of Human Recombinant RANKL, ACF was tested by its ability to induce bioluminescence in engineered RANKL bioassay cells. The EC50 is defined as the effective concentration of the cytokine at which bioluminescence is at 50% of maximum. The EC50 in the above example is ≤ 50 ng/mL.

(B) Human Recombinant RANKL, ACF was resolved with SDS-PAGE under reducing (+) conditions and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant RANKL, ACF has a predicted molecular mass of 19.7 kDa.

Related Products

For a complete list of cytokines or peptide pools, 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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