Revision 3

Store at -20C

#68495

Mouse RANKL/TRANCE/TNFSF11 Recombinant Protein

10 µg

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
19	#O35235	21943

Background

RANKL, also known as TRANCE, TNFSF11, or OPGL, is a member of the TNF superfamily of ligands. T cells, mammary epithelial cells, and endothelial cells can produce RANKL (1). RANKL is expressed as a type II transmembrane protein or cleaved into a soluble form by extracellular proteases, such as TACE, ADAM10, and matrix metalloproteases (1). Alternative splicing also results in the production of soluble RANKL (1). RANKL signaling is antagonized by osteoprotegerin, which functions as a soluble decoy receptor (2). RANKL plays key roles in mammary gland development and dendritic cell survival and is required for osteoclast differentiation and survival (3-6). Research studies have shown that RANKL deficiencies in both mice and humans are associated with abnormally increased bone density and defects in lymphoid organogenesis (5,6).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg mRANKL.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant mouse RANKL was expressed in *E. coli* and is supplied in a lyophilized form. This product was produced without any FBS or animal-derived ingredients.

Bioactivity

The bioactivity of recombinant mRANKL was determined in a secreted embryonic alkaline phosphatase (SEAP) induction assay using RAW-Blue™ cells. The ED_{50} of each lot is less than or equal to 50 ng/ml. RAW-Blue™ Cells were purchased from InvivoGen Inc.

Background References

1. O'Brien, C.A. (2010) *Bone* 46, 911-9.
2. Lacey, D.L. et al. (1998) *Cell* 93, 165-76.
3. Wong, B.R. et al. (1997) *J Exp Med* 186, 2075-80.
4. Fata, J.E. et al. (2000) *Cell* 103, 41-50.
5. Kong, Y.Y. et al. (1999) *Nature* 397, 315-23.
6. Conklin, J.L. et al. (1991) *Gastroenterology* 101, 657-63.

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