

## IVMB0490

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### Product Information

<b>Product SKU:</b> IVMB0490	<b>Clone:</b> AMG-162	<b>Target:</b> RANKL
<b>Size:</b> 100 mg, 50 mg, 25 mg, 5 mg, 1 mg		<b>Isotype:</b> Human IgG2k

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### Additional Information

<b>Reactivity:</b> Human	<b>Host Species:</b> Human
<b>Antibody Type:</b> Biosimilar Recombinant Human Monoclonal Antibody	<b>Expression Host:</b> HEK-293 Cells

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### Immunogen Information

**Background:** Osteoporosis is a disease of bone microarchitecture deterioration commonly seen in postmenopausal women<sup>1</sup>. Estrogen deficiency leads to low bone mass and increased bone fragility due to bone resorption increasing more than formation. Those affected have an increased risk of fracture. RANKL (receptor activator of NFκB ligand) is a TNF family member that acts as a key bone resorption protein by mediating osteoclast formation, activation, and survival via activating its receptor RANK<sup>1,2</sup>.

Denosumab, a fully human monoclonal antibody originally generated using transgenic Xenomouse technology, selectively and with high affinity binds to and inhibits human RANKL, thus preventing interaction with and activation of its receptor RANK on the surface of osteoclasts and their precursors<sup>2</sup>. This blocking activity inhibits the formation, function, and survival of osteoclasts, resulting in reduced bone resorption and consequently reduces the risk of vertebral, nonvertebral and hip fractures. Denosumab increases bone mineral density (BMD) and trabecular and cortical bone strength, with continued antifracture and BMD benefits over 10 years of therapy. Bone resorption is inhibited in cynomolgus monkeys and humans, but not normal mice or rats.

Unlike bisphosphonates, denosumab is not incorporated into bone and its effects on bone turnover markers, BMD and histomorphometric measures are generally reversed upon its discontinuation<sup>1</sup>.

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<b>Endotoxin Level:</b>	< 1.0 EU/mg as determined by the LAL method
<b>Applications:</b>	ELISA
<b>Synonyms:</b>	osteoprotegerin ligand (OPGL), osteoclast differentiation factor (ODF), TNF related activation-induced cytokine (TRANCE), tumor necrosis factor ligand superfamily member 11 (TNFSF11)
<b>Antigen Distribution:</b>	RANKL binds to its receptor RANK, which is located on osteoclasts and osteoclast precursors.
<b>Immunogen:</b>	Purified Recombinant Human RANKL
<b>Formulation:</b>	This biosimilar antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.
<b>Specificity:</b>	Denosumab activity is directed against human RANKL (receptor activator of NFκB ligand).
<b>Recommended Isotype</b>	Human IgG2
<b>Controls:</b>	
<b>Storage &amp; Handling:</b>	Functional grade biosimilar antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at -80°C. Avoid Repeated Freeze Thaw Cycles.