

Active Recombinant Human Tumor Necrosis Factor Receptor Superfamily, Member 11b

Cat. No. TNFRSF11B-4141H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant OPG produced in yeast contains 412 amino acid residues, including 180 residues from mature OPG (a.a 22-201) and 232 residues from the Fc protein of human IgG1, and has a calculated molecular mass of 46.5 kDa. As a result of glycosylation, the recombinant Osteoprotegrin migrates as a 49 kDa protein in SDS-PAGE under reducing conditions. The OPG is purified by proprietary chromatographic techniques.
Species	Human
Source	Human
ProteinLength	22-201 a.a.
Description	Osteoprotegerin acts as decoy receptor for rankl and thereby neutralizes its function in osteoclastogenesis. OPG inhibits the activation of osteoclasts and promotes osteoclast apoptosis in vitro. Bone homeostasis seems to depend on the local rankl/opg ratio. Osteoprotegerin may also play a role in preventing arterial calcification. May act as decoy receptor for trail and protect against apoptosis. Trail binding blocks the inhibition of osteoclastogenesis.
Form	OPG was lyophilized from a 0.2µm filtered concentrated (0.5mg/ml) solution in PBS, pH= 7.4.
Purity	Greater than 90.0% as determined by(a) Analysis by RP-HPLC. (b) Analysis by SDS-

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Bio-activity	Determined by its ability to neutralize the stimulation of U937 cells treated with 10ng/ml of soluble RANKL (sRANKL) corresponding to a Specific Activity of 100,000IU/mg.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Solubility	It is recommended to reconstitute the lyophilized Osteoprotegerin in sterile 18M μ -cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Amino acid sequence	AA Sequence: OPG 22-201: ETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKW KTVCAPCPDHYY, TDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRY LEIEFCL, KHRSCPPGFGVVQAGTPERNTVCKRCPDGGFFSNETSSKAPCRKHTNCS, VFGLLLTQKGNATHDNICSGNSESTQKCGIDVTL.
Storage	Lyophilized Osteoprotegerin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution OCIF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	TNFRSF11B tumor necrosis factor receptor superfamily, member 11b [Homo sapiens]
Official Symbol	TNFRSF11B
Synonyms	TNFRSF11B, OPG, OCIF, Osteoclastogenesis inhibitory factor, TR1, MGC29565,

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	Osteoprotegerin, TR1, Osteoclastogenesis inhibitory factor, tumor necrosis factor receptor superfamily, member 11b
Gene ID	4982
mRNA Refseq	NM_002546
Protein Refseq	NP_002537
MIM	602643
UniProt ID	O00300
Chromosome Location	8q24
Pathway	Cytokine-cytokine receptor interaction; Monoamine Transport; Osteoclast Signaling; Osteoclast differentiation
Function	cytokine activity; protein binding; receptor activity

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