

Recombinant Human TNFRSF11B, His-tagged

Cat. No. TNFRSF11B-143H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human OCIF produced in *E.coli* cells is a single, non-glycosylated, polypeptide chain containing amino acids 201-401 and having a molecular mass of 31 kDa which includes a 4 kDa His tag. The OPG is purified by proprietary chromatographic techniques.

Species Human

Source E.coli

Protein Length 201-401 a.a.

Description Osteoprotegerin, which is a member of the tumor necrosis factor receptor superfamily and is involved in the regulation of bone metabolism. OPG and its ligand (OPGL) are cytokines regulating osteoclasto-genesis. OPGL binds to receptors on the surface of preosteoclasts and stimulates their differentiation into active osteoclasts. This leads to osteoresorption. OPG inhibits this osteoclasto-genesis (OPG is secreted by osteoblasts, and binds to OPGL, thus inhibiting maturation of osteoclasts and osteoresorption). The degree and activity of osteoresorption depend mainly on the balance between OPG and its ligand (OPGL); factors increasing OPGL expression mostly reduce OPG expression and vice versa.

Physical Appearance Sterile Filtered White lyophilized (freeze-dried) powder.

Purity Greater than 80.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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Formulation	The protein was lyophilized from a concentrated (1 mg/ml) solution with 1X PBS, 0.1% SDS and 1 mM DTT.
Solubility	It is recommended to reconstitute the lyophilized Osteoprotegerin in sterile 18 MΩ-cm H ₂ O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Applications	1. Positive control for Western blot; 2. Antibody production; 3. Protein assay
Stability	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]
Synonyms	TNFRSF11B, OPG, OCIF, Osteoclastogenesis inhibitory factor, TR1, MGC29565, 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

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UniProt ID	O00300
Chromosome Location	8q24
Pathway	Cytokine-cytokine receptor interaction
Function	cytokine activity; protein binding; receptor activity

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