



Recombinant Human Osteoprotegerin (OPG)

20171020BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-089S
Size:	10 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	4982
Synonyms:	TNFRSF11B; OPG; TR1; OCIF

Osteoprotegerin (OPG) is a member of the TNFR superfamily that can act as a decoy receptor for RANKL. Binding of soluble OPG to sRANKL inhibits osteoclastogenesis by interrupting the signaling between stromal cells and osteoclastic progenitor cells, thereby leading to excess accumulation of bone and cartilage. OPG is expressed in a wide variety of tissues including adult heart, lung, kidney, liver, spleen, prostate, lymph node and bone marrow. OPG is secreted both as a monomeric and a dimeric protein. Its primary structure consists of seven distinct domains, four of which corresponds to the extracellular cysteine-rich domains of TNFR proteins and constitutes the soluble OPG. Recombinant human OPG is a soluble 20.0 kDa protein containing 174 amino acid residues.

Sequence

METFPFKYLHYDEETSHQLLCKDKPPGTYLKQHCCTAKWKTVCAPCPDHYTDSWHTSDECLYCSVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFSSNETSSKAPCRKHTNCSVFGLLLTQKGNATHDNICSGNSESTQK

Database References

Protein RefSeq:	NP_002537.3
Uniprot ID:	O00300
mRNA RefSeq:	NM_002546.3

Product Specifications

Expressed in	E. coli
Purity	> 98% by SDS-PAGE & HPLC analyses
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	lyophilized
Length (aa):	174
MW:	20 kDa

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

Reconstitution: Centrifuge the vial prior to opening. Reconstitute in 5 mM Tris, pH 7.5 to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Determined by its ability to neutralize the stimulation of U937 cells treated with 10 ng/ml of soluble RANKL (sRANKL).