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## Product Data Sheet

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Product Name: OPG Human  
 Cat. No.: GP20796  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	TNFRSF11B; OPG; OCIF; Osteoclastogenesis inhibitory factor; Osteoprotegerin; TR1; MGC29565.		
Amino Acid Sequence	METFPPKYLH YDEETSHQLL CDKCPPGTYL KQHCTAKWKT VCAPCPDHYY TDSWHTSDEC LYCSPVCKEL QYVKQECNRT HNRVCECKEG RYLEIEFCLK HRSCPPGFGV VQAGTPERNT VCKRCPDGFF SNETSSKAPC RKHTNCSVFG LLLTQKGNAT HDNICSGNSE STQK.		
Solubility	It is recommended to reconstitute the lyophilized Osteoprotegerin in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The OPG was lyophilized from a 0.2μm filtered concentrated (0.5mg/ml) solution in PBS, pH 7.4.		

### Introduction

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.

### Biological Activity

The activity is determined by its ability to neutralize the stimulation of U937 cells treated with 10ng/ml of soluble RANKL corresponding to a specific activity of 100,000IU/mg.

### Stability

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Lyophilized Osteoprotegerin although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution OCIF should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

Recombinant Human Osteoprotegerin produced in E.coli cells is a single, non-glycosylated, polypeptide chain containing 174 amino acids and having a molecular mass of 20kDa. The OPG is purified by proprietary chromatographic techniques.

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