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## Product Data Sheet

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Product Name: OPG Human, His  
 Cat. No.: GP20797  
 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; TR1; MGC29565.		
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 protein was lyophilized from a concentrated (1mg/ml) solution with 1X PBS, 0.1% SDS and 1mM DTT.		

### Introduction

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.

### 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.

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

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### Background

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.

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