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## Product Data Sheet

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Product Name: FGF 2 Human, Thermostable

Cat. No.: GP20215

Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Prostatropin; HBGH-2; HBGF-2; FGF-2; FGF-b.		
Solubility	It is recommended to add deionized water to prepare a working stock solution of approximately 0.5-1mg/ml and let the lyophilized pellet dissolve completely.		
Formulation	FGF2 was filtered and lyophilized from a solution containing 20mM potassium phosphate buffer and 750mM sodium chloride, pH 7.5.		

### Introduction

Basic fibroblast growth factor is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. This protein functions as a modifier of endothelial cell migration and proliferation, as well as an angiogenic factor. It acts as a mitogen for a variety of mesoderm- and neuroectoderm-derived cells in vitro, thus is thought to be involved in organogenesis. Three alternatively spliced variants encoding different isoforms have been described. The heparin-binding growth factors are angiogenic agents in vivo and are potent mitogens for a variety of cell types in vitro. There are differences in the tissue distribution and concentration of these 2 growth factors.

### Stability

Store lyophilized protein at -20°C . Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C .

### Background

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

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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FGF-Basic Thermostable is a stabilized form of FGF-2 growth factor which enables a novel method to produce FGF2-dependent cell cultures more efficiently, having less media changes. FGF-Basic Thermostable can maintain its biological activity even after five days at 37°C. The increase in the stability of FGF2 in cell-culture enables a more homogenous, undifferentiated stem cell culture, while saving scientists crucial time and money, as frequent supplementation of FGF-basic and the everyday medium change is not necessary. Thermostable FGF-2 is a hyperstable protein. The Thermal stability of the protein is increased by 15°C compared to the wild-type FGF-2. Thermostable FGF-2 is more than 5-times prolonged half-life in human cell culture incubated at 37°C. The FGF-2 Thermostable protein is engineered with fully retained biological function and has no harmful stabilizing additives. Thermostable FGF2 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 175 amino acids including a 20 aa His tag and thrombin cleavage recognition site at N-terminus. The total calculated molecular mass is 19.4kDa.

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