

Recombinant Human Basic Fibroblast Growth Factor (rhbFGF)

Catalog Number: 104-02

Description

Basic Fibroblast Growth Factor (bFGF) is a member of the FGF family of mitogenic peptides which is comprised of at least 23 proteins showing 35-55% amino acid sequence conservation. Unlike other FGF family members, bFGF and acidic FGF (aFGF) lack signal peptides and are secreted via a different mechanism other than the classical protein secretion pathway. bFGF is a single-chain polypeptide growth factor that plays a significant role in the processes of wound healing, inducing angiogenesis and maintaining human pluripotent stem cell renewal. Several different forms of the bFGF exist ranging from 18-24 kDa in size due to the use of alternative start sites within the *FGF-2* gene. It has a 55 percent amino acid residue identity to aFGF and has potent heparin-binding activity. bFGF is extremely efficient in inducing DNA synthesis in a variety of cell types from mesoderm and neuroectoderm lineages. It was originally named bFGF based upon its chemical properties and to distinguish it from aFGF.

Synonyms FGF-2, HBGF-2, Prostatropin, Fibroblast Growth Factor-basic (FGFb)

AA Sequence AAGSITTLPA LPEDGGSGAF PPGHFKDPKR LYCKNGGFFL RIHPDGRVDG

VREKSDPHIK LQLQAEERGVVSIKGVCANR YLAMKEDGRL LASKCVTDEC

FFFERLESNN YNTYRSRKYT SWYVALKRTG QYKLGSKTGP GQKAILFLPM SAKS

Source Escherichia coli

Molecular Weight Approximately 17.3 kDa, a single non-glycosylated polypeptide chain containing 155 amino

acids.

Purity >96% by SDS-PAGE and HPLC analyses.

Biological Activity Fully biologically active. The ED₅₀ is < 0.5ng/ml, corresponding to a specific activity of 2 x

10⁶ units/mg, as determined by proliferation of BAF3 cells expressing FGF receptors

Physical Appearance White lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered concentrated (1 mg/ml) solution in PBS, pH 7.4.

Endotoxin $< 1EU/\mu g$ of growth factor as determined by LAL method.

Reconstitution Reconstitute in sterile distilled water containing 0.1% BSA to a concentration of 0.1-1.0

mg/mL.

Storage Store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For

maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.

Usage This product is for research use only. It is not approved for use in humans, animals, or *in vitro*

diagnostic procedures.