

Human bFGF / FGF2 Protein

Catalog Number: 10014-HNAE



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

FGF2, BFGF, FGFB, HBGF-2

Protein Construction:

A DNA sequence encoding the mature form of human bFGF (NP_001997.5) (Pro 143-Ser 288) was expressed, with an additional Met at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured in a cell proliferation assay using BALB/c 3T3 mouse embryonic fibroblasts. The ED50 for this effect is typically 0.02-0.1 ng/ml.

Endotoxin:

< 1.0 EU per mg protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human bFGF is a disulfide-linked homodimeric protein. The reduced monomer consists of 147 amino acids and has a calculated molecular mass of 16.5 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of bFGF is approximately 17 kDa.

Formulation:

Lyophilized from sterile 20mM Tris, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

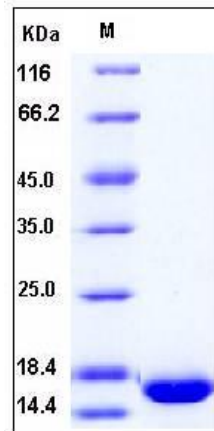
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

FGF basic is a member of the FGF family consisting of at least 23 related mitogenic proteins and is secreted by mechanisms other than the classical protein secretion pathway due to the lack of signal peptide. FGF basic is expressed extensively, including neural tissue, pituitary, adrenal cortex, corpus luteum, and placenta. Members of the fibroblast growth factor (FGF) family of proteins stimulate the proliferation and differentiation of target cells through receptor-mediated pathways, and it appears that FGF acidic and basic bind to the same high affinity receptors. Binding of FGF basic to heparin or cell surface heparan sulfate proteoglycans is prerequisite for ligation of bFGF and the high affinity receptors. FGF basic and acidic have a similar range of biological activities which are implicated in several important physiological and pathological processes, such as embryonic development and differentiation, morphogenesis, angiogenesis, and wound healing. Five different isoforms with distinct properties are resulted from alternative translation from non-AUG (CUG) and AUG initiation codons. The CUG-initiated isoforms are localized in the nucleus and are responsible for the intracrine effect, whereas the AUG-initiated form is mostly cytosolic and is responsible for the paracrine and autocrine effects of this FGF.

References

1. Wiedlocha, A. et al., 1994, Cell. 76: 1039-1051.
2. Orpana, A. et al., 2002, Leuk. Lymphoma. 43: 219-224.
3. Dowd, C.J. et al., 1999, J. Biol. Chem. 274: 5236-5244.
4. Lee, M. et al., 2008, Tissue. Eng. Part A. 14: 1395-1402.

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