

Recombinant Human Basic Fibroblast Growth Factor

#R00106

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- A minimum of 12 months from date of receipt, when stored at ≤ -20 °C as supplied.

- 1 month, 2 to 8 °C under sterile conditions after reconstitution.

- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Human bFGF, encoded by the FGF2 gene, is a member of the fibroblast growth factor (FGF) family. Fibroblast growth factor was found in pituitary extracts in 1973 and then tested in a bioassay that caused fibroblasts to proliferate. After further fractionating the extract using acidic and basic pH, two different forms have isolated that named "acidic fibroblast growth factor" (FGF-1) and "basic fibroblast growth factor" (FGF-2). Human bFGF shares 54% amino acid sequence identity with aFGF. Affinity between bFGF and its receptors can be increased by heparin or heparan sulfate proteoglycan. bFGF plays an important role in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. bFGF are also involved in a variety of biological processes, including embryonic development, morphogenesis, tissue repair, tumor growth and invasion. Additionally, bFGF is frequently used for a critical component of cell culture medium,

e.g., human embryonic stem cell culture medium, serum-free culture systems.

AA Sequence

MPALPEDGGSGAFPPGHHFKDPKRLYCKNGGFFLRIH
PDGRVDGVREKSDPHIKLQLQAEERGVSIGVCAN
RYLAMKEDGRLLASKCVTDECFERLESNNYNTYR
SRKYTSWYVALKRTGQYKLGSKTGPQKAILFLPMS
AKS

Reconstitution

Prior to opening, it is recommended to centrifuge the vial briefly to bring the contents down the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-0.3 mg/ml. If animal-origin-free condition is expected in your product, then sterile distilled water is recommended. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	FGF-2, HBGF-2
Accession	P09038
GeneID	2247
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 16.5 kDa, a single non-glycosylated polypeptide chain containing 147 amino acids.
Purity	> 96% by SDS-PAGE analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using murine balb/c 3T3 cells is less than 0.05 ng/ml, corresponding to a specific activity of > 2.0 × 10 ⁷ U/mg.

Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris-HCl, 150 mM NaCl, 5% Trehalose, 0.02% Tween-20, pH 7.6.
Endotoxin	Less than 1 EU/µg of rHubFGF as determined by LAL method.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.