

Recombinant Rat Basic Fibroblast Growth Factor

#R00320

Size: 10 µg/100 µg/500 µg

Stability & Storage

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

- 12 months from date of receipt, -20 to -70 °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

Rat 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). Rat bFGF shares 96 % amino acid sequence identity with human bFGF, and 98 % amino acid sequence identity with mouse. 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

MPALPEDGGGAFFPGHFKDPKRLYCKNGGFFLRIHP
DGRVDGVREKSDPHVKLQLQAEERGVSIGVCANR
YLAMKEDGRLLASKCVTEECFFFERLESNNYNTYRS
RKYSSWYVALKRTGQYKLGSKTGPGQKAILFLPMSA
KS

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. 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	P13109
GeneID	54250
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 16.4 kDa, a single non-glycosylated polypeptide chain containing 146 amino acids.
Purity	> 98 % by SDS-PAGE and HPLC 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 0.2 ng/ml, corresponding to a specific activity of > 5.0 × 10 ⁶

IU/mg.

Physical Sterile Filtered White lyophilized

Appearance (freeze-dried) powder.

Formulation Lyophilized from a 0.2 µm
filtered solution in PBS, pH 7.4.

Endotoxin Less than 1 EU/µg of rRtbFGF
as determined by LAL method.