

Recombinant Rat Fgf2 protein

Cat. No. Fgf2-40R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Fgf2 protein was expressed in Escherichia coli.
Species	Rat
Source	E.coli
ProteinLength	146
Description	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.
Form	Lyophilized from a 0.2µm filtered solution in PBS, pH 7.4.

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Bio-activity	Fully biologically active when compared to standard. The ED50 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 $> 5.0 \times 10^6$ IU/mg.
Molecular Mass	Approximately 16.4 kDa, a single non-glycosylated polypeptide chain containing 146 amino acids.
AA Sequence	MPALPEDGGGAFFPGHFKDPKRLYCKNGGFFLRHPDGRVDGVREKSDPHVKLQL QAEERGVSISIKGVCANRYLAMKEDGRLLASKCVTEECFFFERLESNNYNTYRSRKY SSWYVALKRTGQYKLGSKTGPGQKAILFLPMSAKS
Endotoxin	Less than 1 EU/g of rRtbFGF as determined by LAL method.
Purity	>98% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
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 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	Fgf2
Official Symbol	Fgf2

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Synonyms	FGF-2, HBGF-2
Gene ID	54250
mRNA Refseq	NM_019305
Protein Refseq	NP_062178
UniProt ID	P13109

SDS-PAGE of Fgf2-40R

