ACTIVE BIOSCIENCE
PROTEINS · CELLS · ANTIBODIES

Rat FGF-basic, FGF-2

Synonyms: Fgf2, bFGF, Fgf-2

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
10 µg	1370.970.010		
50 µg	1370.970.050		
200 µg	1370.970.200		
1 mg	1370.970.199		

Please enquire for bulk quantities and other vial sizes

Description

The FGF family is composed of at least 23 polypeptides that show a variety of biological activities towards cells of mesenchymal, neuronal and epithelial origin. All members are heparin-binding growth factors (HB-GF). Until the structure of basic fibroblast growth factor (bFGF/FGF-2) was determined, a number of synonyms were used to describe this growth factor. As is often the case, the nomenclature reflected the observed activities reported by individual groups. Basic FGF has been reported as leukemia growth factor, macrophage growth factor, endothelial growth factor and tumor angiogenesis factor. The eventual isolation and characterization of bFGF was done from soluble brain extracts. bFGF was found to have a molecular mass of 16.5 kDa and to be 154 amino acids in length. Interestingly, bFGF contains no hydrophobic leader sequence previously thought to be required for cell secretion. Basic FGF bears 55% homology to acidic FGF and also seems to exist in three forms: the 154 amino-acid form and two other truncated versions of 146 and 131 amino acids lacking the N-terminal 9 and 24 residues. Acidic and basic FGF compete for the binding to 125 kDa and 145 kDa receptor species. However, acidic FGF has a higher affinity for the 125 kDa species, while basic FGF has a higher affinity for the 145 kDa species. FGF receptor activation leads to the activation of MAP kinase and protein kinase C. FGF's induce the proliferative response in cells derived from mesoderm and neuroectoderm. Perhaps one of the most potentially significant applications of bFGF is related to its reported ability to induce angiogenesis. The cDNA of native rat FGF-2 (Ala11-Ser154) was cloned from total RNA derived from a rat embryo using standard protocols.

- **Source** *E. Coli*
- **Purity** ≥ 98 % (SDS-PAGE, silver stained)
- **Endotoxin level** < 0.1 ng per µg of rat FGF-2
- **Physical state** Sterile filtered, lyophilized

Biological Activity

The ED_{50} for stimulation of cell proliferation in human umbilical vein endothelial cells (HUVEC) by mouse FGF-2 has been determined to be in the range of 0.1-2 ng/ml.

Reconstitution

The rat FGF-2 is supplied in lyophilized form and can be reconstituted with ddH2O at 50 µg/mL. This solution can be diluted into other buffered solutions or stored frozen for future use.

Amino Acid Sequence

ALPEDGGGAF PPGHFKDPKR LYCKNGGFFL RIHPDGRVDG VREKSDPHVK LQLQAEERGV VSIKGVCANR YLAMKEDGRL LASKCVTEEC FFFERLESNN YNTYRSRKYS SWYVALKRTG QYKLGSKTGP GQKAILFLPM SAKS

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

ORDERING
Tel.: +49 40 43208448-0
order@active-bioscience.de
www.active-bioscience.de

TECHNICAL SUPPORT
Tel.: +49 40 43208448-11
support@active-bioscience.de

Active Bioscience GmbH
Oberaltenallee 8
D-22081 Hamburg
HRB 98170 Amtsgericht Hamburg