ACTIVE BIOSCIENCE
PROTEINS · CELLS · ANTIBODIES

Murine FGF-basic, FGF-2

Synonyms: Fgf2, Fgfb, bFGF, Fgf-2

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
10 µg	1369.960.010		
50 µg	1369.960.050		
200 µg	1369.960.200		
500 µg	1369.960.500		
1 mg	1369.960.199		

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 was 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. It seems that basic FGF reduces the average doubling time by shortening the G1 phase of the cell cycle. Furthermore, it has been reported to induce the release of plasminogen activator by endothelial cells. Perhaps one of the most potentially significant applications of bFGF is related to its reported ability to induce angiogenesis.

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

Biological Activity

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

Reconstitution

The lyophilized basic FGF should be reconstituted in water containing at least 0.1% human or bovine serum albumin to a concentration not lower than 10µg/ml.

Amino Acid Sequence

ALPEDGGAAF 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