Fibroblast Growth Factor from bovine pituitary cell culture tested

Catalog Number F3133
Storage Temperature –20 °C

Synonym: FGF

Product Description
Fibroblast Growth Factor (FGF) is a potent mitogenic agent for a wide variety of mesoderm-derived cells including Balb/c 3T3 fibroblasts, capillary and endocardial endothelial cells, myoblasts, vascular smooth muscle cells, mesothelial cells, glial and astroglial cells, and adrenal cortex cells. Purified from bovine pituitary glands, FGF is less pure than Fibroblast Growth Factor-Basic (bFGF, Catalog Number F5392), the 16.4 kDa protein responsible for most of the bioactivity of FGF. The closely related protein Fibroblast Growth Factor-Acidic (aFGF, Catalog Number F5267), also purified from bovine brain, acts upon the same cellular receptors as bFGF, but with differing specific activities depending on the cell type. These two mitogens may play important roles in vivo in cell proliferation and differentiation associated with embryogenesis, tissue regeneration, CNS development, wound healing, angiogenesis, and tumor progression. Since bFGF, found in a variety of organs, acts on a wide range of cell types and has multifunctional actions, it has numerous synonyms, including heparin-binding growth factor (class II or beta), eye-derived growth factor I, cartilage-derived growth factor, and astroglial growth factor II.

FGF is supplied as ∼10 µg of protein lyophilized from 50 µl of a solution containing 25 mM sodium phosphate, pH 7.0, with 50 mM NaCl and 100 µg of bovine serum albumin as a carrier protein.

Identity and purity of FGF are established by immunoblotting. FGF is observed as a single 16 kDa band using anti-FGF-basic for detection. There is only a slight reaction against anti-FGF acidic.

The proliferative activity of FGF-TC is tested in culture using fetal bovine heart endothelial cells (ATCC CRL 1395) seeded at low density. After incubation with various concentrations of FGF for 3 days and with MTT for 4 hours, a dose-depผated increase in $A_{540}$ was observed.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
To prepare a stock solution, reconstitute the contents of the vial in a solution of 0.1–1.0% BSA or 1–10% serum in buffered saline or tissue culture medium. This may be diluted immediately before use to the final working concentration of FGF, generally 1–100 ng/ml. Additional filtration is not recommended and may result in product loss due to adsorption onto filter membrane.

Storage/Stability
Store the product at –20 °C.

After reconstitution, the product may be stored for two weeks at 2–8 °C or may be stored as aliquots at –20 °C. Prolonged storage of product or repeated freezing and thawing is not recommended.

References