



Fibroblast Growth Factor-9, rat recombinant (rrFGF-9)

Catalog No: 97058
Lot No: XXXXX
Source: *E. coli*
Synonyms: GAF (Glia-activating factor), HBGF-9, MGC119914, MGC119915, FGF-9

Background

Rat and mouse FGF-9 show a very high homology to human FGF-9. The transcripts for FGF-9 have been found in brain and in kidney tissue. Fibroblast Growth Factor-9 is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. FGF9 was isolated as a secreted factor that exhibits a growth-stimulating effect on cultured glial cells. In nervous system, this protein is produced mainly by neurons and may be important for glial cell development. Expression of the mouse homolog of this gene was found to be dependent on Sonic hedgehog (Shh) signaling. Mice lacking the homolog gene displayed a male-to-female sex reversal phenotype, which suggested a role in testicular embryogenesis. Fibroblast Growth Factor 9 may have a role in glial cell growth and differentiation during development, gliosis during repair and regeneration of brain tissue after damage, differentiation and survival of neuronal cells, and growth stimulation of glial tumors.

Description

FGF-9 rat recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 207 amino acids and having a molecular mass of 23.3 kDa. FGF-9 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The FGF-9 was lyophilized from a concentrated (1 mg/ml) sterile solution containing 10 mM NaP, pH 7.5 and, 75 mM ammonium sulfate.

Solubility

It is recommended to reconstitute the lyophilized FGF-9 in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Fibroblast Growth Factor-9, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGF9 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

MPLGEVGSYF GVQDAVPFGN VPVLPVDSPV LLNDHLGQSE AGGLPRGPAV TLDLHLKGIL RRRQLYCRTG FHLEIFPNGT
IQGTRKDHRS FGILEFISIA VGLVSIRGVD SGLYLG MNEK GELYGSEKLT QECVFREQFE ENWYNTYSSN LYKHVDTGRR
YYVALNKDGT PREGTRTKRH QKFTHFLPRP VDPDKVPELY KDILSQS

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Activity

The ED50, calculated by the dose-dependant proliferation of BAF3 cells expressing FGF receptors (measured by 3H-thymidine uptake) is <0.5 ng/ml, corresponding to a specific activity of 2 MU/mg.

Usage

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