Recombinant Human
FGF-basic

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Background:

FGF basic (FGF-2, HBGF-2) is one of at least 22 mitogenic proteins of the FGF family, which show 35-60% amino acid conservation. Unlike other FGFs, FGF acidic and basic lack signal peptides and are secreted by an alternate pathway. Human and mouse mature FGF basic shares 96% sequence identity. Binding of FGF to heparin or cell surface HSPG is necessary for binding, dimerization and activation of tyrosine kinase FGF receptors. FGF basic binds other proteins, polysaccharides and lipids with lower affinity. Expression of FGF basic is nearly ubiquitous but disruption of the mouse FGF basic gene gives a relatively mild phenotype, suggesting compensation by other FGF family members. FGF basic modulates normal processes as angiogenesis, wound healing and tissue repair, embryonic development and differentiation, neuronal function and neural degeneration.

Description:

Recombinant Human FGF-basic produced in E. coli is a non-glycosylated polypeptide chain containing 157 amino acids and having a molecular mass of 17kDa.

Quality Control:

Biological activity: The ED50 as determined by the dose-dependant proliferation of BALB/3T3 cells was found to be less than 0.5 ng/ml, corresponding to a Specific Activity of 2.0 x 10^6 IU/mg.

Purity: Greater than 90.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

Amino-Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Gly-Thr-Met-Ala-Ala.

Endotoxin: Less than 0.1ng/μg (1.0EU/μg) of FGF-basic as determined by LAL test.

Formulation:

Human FGF-basic was lyophilized from 1mg/ml solution after extensive dialysis against 20 mM phosphate buffer, pH 7.2, 50 mM Na2SO4, 0.2 mM DTT and 0.2 mM EDTA.

Reconstitution:

It is recommended to reconstitute the lyophilized rhFGF-basic in sterile 18MΩ-cm H_2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Storage:

Lyophilized rhFGF-basic although stable at room temperature for 3 weeks, should be stored desiccated below -18°C Upon reconstitution rhFGF-basic 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 avoid freeze-thaw cycles.