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Mouse Basic Fibroblast Growth Factor (mFGF basic/FGF2)

For Research Use Only. Not for Use in Diagnostic Procedures.

MW (kDa):	UniProt ID:	Entrez-Gene Id:
17	#P15655	14173

Background

FGF basic (FGF2) is produced in both embryonic and adult cell types, and contributes to the pathogenesis of various diseases, including cancer and atherosclerosis (1). FGF basic is involved in developmental processes and regulates differentiation, proliferation, and migration (1-6). FGF basic is a critical factor for growing embryonic stem cells in culture without inducing differentiation. FGF basic has a high affinity for heparan sulfate (1,2) and binding is a step in the FGF basic activation of FGFR tyrosine kinase. There are four distinct FGF receptors and each has multiple splice variants. FGF basic binds with high affinity to many, but not all, FGFRs. Signaling cascades activated through FGF basic binding to FGFR include the ras-raf-MAPK, PLC γ /PKC, and PI3K/AKT pathways (1).

Endotoxin

Less than 0.01 ng endotoxin/1 μ g mFGF basic.

Purity

>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant mFGF basic. All lots are greater than 98% pure.

Source / Purification

Recombinant mouse FGF basic (mFGF basic) Ala11-Ser154 (Accession #NP_032032) was produced in *E. coli* at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant mFGF basic was determined in a NIH/3T3 cell proliferation assay. The ED₅₀ of each lot is between 50-400 ng/ml.

Background References

1. Dvorak, P. and Hampl, A. (2005) *Folia Histochem Cytobiol* 43, 203-8.
2. Ornitz, D.M. and Itoh, N. (2001) *Genome Biol* 2, REVIEWS3005.
3. Shi, Y. et al. (2008) *Crit Rev Oncol Hematol* 65, 43-53.
4. Fontijn, D. et al. (2006) *Br J Cancer* 94, 1627-36.
5. Marek, L. et al. (2009) *Mol Pharmacol* 75, 196-207.
6. Acevedo, V.D. et al. (2009) *Cell Cycle* 8, 580-8.

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