



Product Specification Sheet

Product Name	Stemfactor™ Fibroblast Growth Factor-basic, Human Recombinant
Description	Fibroblast Growth Factor-basic (bFGF), also known as FGF-2 or FGFb, is a heparin-binding member of the FGF superfamily of molecules. Proteins of this family play a central role during prenatal development and postnatal growth and regeneration of a variety of tissues by promoting cellular proliferation and differentiation. Additionally, bFGF is a critical component of embryonic stem cell culture medium, allowing cells to remain in an undifferentiated state in serum-free medium ^{1,2} . Stemfactor bFGF is an approximately 17 kDa protein consisting of 155 amino acid residues.
Catalog Number	03-0002
Quantity	50 µg
Source	<i>E. coli</i>
Formulation	Lyophilized from 5 mM Tris-HCl, pH 7.5 with 150 mM NaCl.
Amino Acid Sequence	MAAGSITTLP ALPEDGGSGA FPPGHFKDPK RLYCKNGGFF LRIHPDGRVD GVREKSDPHI KLQLQAEERG VVSIKGVCAN RYLAMKEDGR LLASKCVTDE CFFFERLESN NYNTYRSRKY TSWYVALKRT GQYKLGSKTG PGQKAILFLP MSAKS
Uniprot Accession No.	P09038, residues 1-155.
Purity	Greater than 95% by SDS-PAGE analysis.
Endotoxin Level	Less than 1.0 EU/µg of bFGF as determined by the LAL method.
Biologic Activity	The ED ₅₀ is 0.1 to 1 ng/ml as determined by the dose dependent proliferation of NIH 3T3 cells.
Sterility	Tested to be negative for <i>Mycoplasma</i> sp. by PCR and microbial contamination by a sterility test.
Storage and Stability	Stemfactor bFGF is shipped at room temperature. Lyophilized bFGF is stable for up to 6 months from date of receipt when stored at -20°C to -80°C. Reconstituted bFGF, at concentrations greater than or equal to 0.1 mg/ml, is stable for up to 3 months when stored at -20°C and up to 6 months when stored at -80°C.
Reconstitution	Centrifuge briefly and then reconstitute bFGF in 500 µl of 10 mM Tris, pH 7.6, to yield a stock solution of 0.1 mg/ml of bFGF. Avoid freeze-thaw cycles as it can result in loss of activity.
References	<ol style="list-style-type: none">1. Amit, M., Carpenter, M.K., Inokuma, M.S., Chiu, C.P., Harris, C.P., Waknitz, M.A., Itskovitz-Eldor, J., and Thompson, J.A. (2000) Clonally derived human embryonic stem cell lines maintain pluripotency and proliferative potential for prolonged periods of culture. <i>Dev Biol</i> 227: 271-278.2. Xu, C., Rosler, E., Jiang, J., Lebkowski, J.S., Gold, J.D., O'Sullivan, C., Delavan-Boorsma, K., Mok, M., Bronstein, A., and Carpenter, M.K. (2005) Basic fibroblast growth factor supports undifferentiated human embryonic stem cell growth without conditioned medium. <i>Stem Cells</i> 23: 315-323.

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Stemgent, 10575 Roselle St., San Diego, CA 92121 www.stemgent.com v3.0