

Cytokines

Human Recombinant bFGF



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Basic fibroblast growth factor

Catalog #	78003.1	10 µg
	78003	50 µg
	78003.2	1000 µg

Product Description

Basic fibroblast growth factor (bFGF) is a prototypic member of the fibroblast growth factor family. Cytokines in the FGF family possess broad mitogenic and cell survival activities (Folkman & Klagsbrun; Kimelman & Kirschner) and are involved in a variety of biological processes including cell proliferation, differentiation, survival, and apoptosis (Folkman & Klagsbrun; Klagsbrun; Rifkin & Moscatelli). bFGF has the β -trefoil structure (Ponting & Russell), binds to the four FGF receptor (FGFR) family members, and activates JAK/STAT, PI3K, ERK1/2, and other receptor tyrosine kinase (RTK) signaling pathways. It supports the maintenance of undifferentiated human embryonic stem cells (Xu et al.; Kang et al.), stimulates human embryonic stem cells to form neural rosettes (Zhang et al.), and improves proliferation of human mesenchymal stem cells and enhances chondrogenic differentiation (Solchaga et al.).

Product Information

Alternative Names:	Basic fibroblast growth factor, FGF- β , FGF2, Fibroblast growth factor-basic, HBGF-2
Accession Number:	P09038
Amino Acid Sequence:	AAGSITLPA LPEDGGSGAF PPGHFKDKPKR LYCKNGGFFL RIHPDGRVDG VREKSDPHIK LQLQAEERGV VSIKGVCANR YLAMKEDGRL LASKCVTDEC FFFERLESNN YNTYRSRKYT SWYVALKRTG QYKLGSKTGP GQKAILFLPM SAKS
Predicted Molecular Mass:	17.1 kDa
Species:	Human
Cross Reactivity:	Mouse, Rat, Monkey
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	E. coli

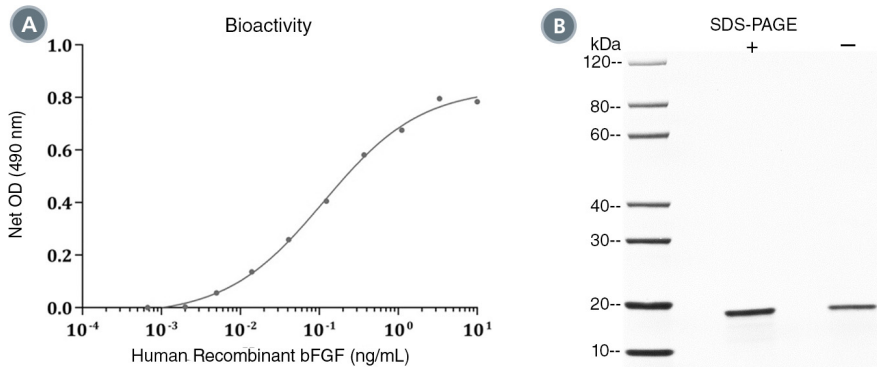
Specifications

Activity:	The specific activity is $\geq 4 \times 10^6$ units/mg ($EC_{50} \leq 0.25$ ng/mL) as determined by a cell proliferation assay using BALB/c 3T3 cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/ μ g protein.

Preparation and Storage

Storage:	Store at -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 2 weeks or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant bFGF was tested by its ability to promote the proliferation of BALB/c 3T3 cells. Cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the above example is 0.1 ng/mL.

(B) 2 µg of Human Recombinant bFGF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant bFGF has a predicted molecular mass of 17.1 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

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