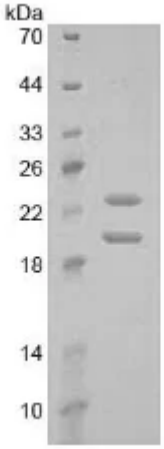
Active Fibroblast Growth Factor 2, Basic (FGF2)

Catalog#:PEM12397

概述（Summary）

别称（Alternative Names）	B-FGF; BFGF; FGFB; HBGH-2; Basic Fibroblast Growth Factor; Heparin-binding growth factor 2
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Pro10-Ser154】
Accession #	P15655
表达宿主（Host）	E.coli
种属（Species）	Mus musculus (Mouse)
预测分子量（Predicted MW）	20.0 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Acts as a ligand for FGFR1, FGFR2, FGFR3 and FGFR4. Also acts as an integrin ligand which is required for FGF2 signaling. Binds to integrin ITGAV:ITGB3. Plays an important role in the regulation of cell survival, cell division, cell differentiation and cell migration. Functions as a potent mitogen in vitro. Can induce angiogenesis. Mediates phosphorylation of ERK1/2 and thereby promotes retinal lens fiber differentiation.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

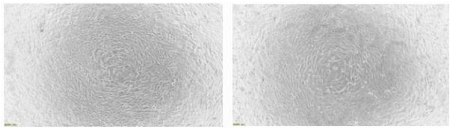


Figure 2. Cell proliferation of Balb/c 3T3 cells after stimulated with rmFGF2 .
(A) Balb/c 3T3 cultured in DMEM, stimulated with 1 ug/ml rmFGF2 48h;
(B) Unstimulated Balb/c 3T3 cells cultured in 0.4% FBS DMEM for 48h.

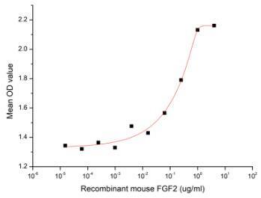


Figure 3. The dose-effect curve of recombinant mouse FGF2 on Balb/c 3T3 cells

Basic fibroblast growth factor (FGF2), also known as bFGF, FGF-β is a member of a large family of structurally related heparin-binding proteins (the FGFs) involved in the regulation of cell proliferation, growth and differentiation. It involved in many biological processes including angiogenesis, embryonic development and wound healing. Additionally, FGF2 is a critical component of human embryonic stem cell culture medium. Besides, Caspase 1 (CASP1) has been identified as an interactor of FGF2, thus a binding ELISA assay was conducted to detect the interaction of recombinant mouse FGF2 and recombinant mouse CASP1. Briefly, FGF2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100ul were then transferred to CASP1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-FGF2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution , wells were incubated 15-25 minutes at 37°C. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of FGF2 and CASP1 was shown in Figure 1, and this effect was in a dose dependent manner. To test the effect of rmFGF2 on cell proliferation of 3T3 fibroblasts , Balb/c 3T3 cells were seeded into triplicate wells of 96-well plates at a density of 8, 000 cells/well and allowed to attach overnight, then the medium was replaced with 0.4% FBS standard DMEM prior to the addition of various concentrations of recombinant mouse FGF2. After incubated for 48h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μl of CCK-8 solution was added to each well of the plate， then measure the absorbance at 450 nm using a microplate reader after incubating the plate for 1-4 hours at 37 °C. Cell proliferation of Balb/c 3T3 cells after incubation with rhEGF for 48h observed by inverted microscope was shown in Figure 2. The dose-effect curve of rmFGF2 was shown in Figure 3. It was obvious that rmFGF2 significantly promoted cell proliferation of 3T3 cells. The ED50 for this effect is typically 0.2

ug/ml.

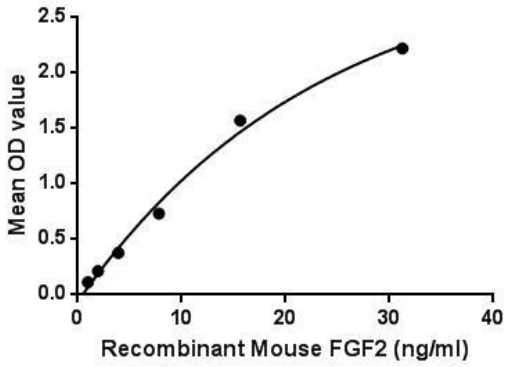


Figure 1. The binding activity of FGF2 with CASP1

注意事项（Note）

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