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Active Recombinant Human FGF-2/bFGF Protein

Catalog No.: RP01042 Recombinant 1 Publications

Sequence Information

Species	Gene ID	Swiss Prot
Human	2247	P09038-4

Tags
No tag

Synonyms
BFGF; FGF-2; FGFB; HBGF-2;FGF2;FGF-2;FGFB;HBGF-2;Basic FGF; BFGF; fibroblast growth factor 2

Product Information

Source	Purification
E. coli	> 95% by SDS-PAGE.

Endotoxin
< 1.0 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of 20mM Tris□150 mM NaCl,pH7.5.Contact us for customized product form or formulation.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Background

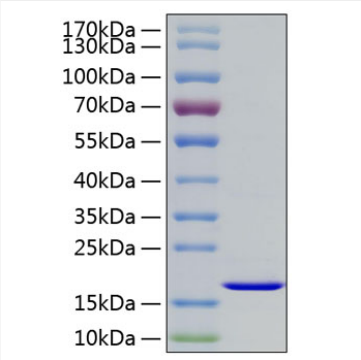
Basic Information

Description
Active Recombinant Human FGF-2/bFGF Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Pro143-Ser288) of human FGF2 (Accession #NP_001997.5).

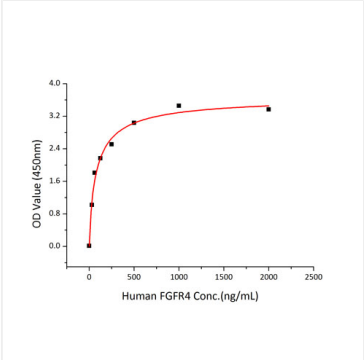
Bio-Activity
1.Measured by its binding ability in a functional ELISA. Immobilized Human FGF2 at 0.5 μg/mL (100 μL/well) can bind Human GPC3 with a linear range of 7-20 ng/mL.|2.Measured in a cell proliferation assay using BALB/c 3T3 mouse embryonic fibroblasts. The ED_{50} for this effect is typically 0.635-2.54 ng/mL, corresponding to a specific activity of 3.94×10^5~1.57×10^6 units/mg.|3.Recombinant Human VEGFA(40 ng/mL, Cat. RP01162) and bFGF(50 ng/mL) induce mesoderm cells to differentiate into hematopoietic stem and progenitor cells. After 4 days induction, pebbly-like CD43+ hematopoietic stem and progenitor cells appeared in the hematogenic endothelium.|4.The primary neural stem cells were cultured with 20 ng/mL bFGF and observed every 24 h. Results showed that the particle size of the suspended neural stem cells gradually increased.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

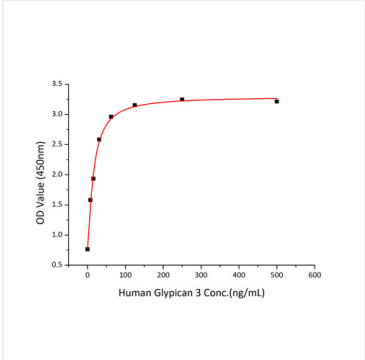
Validation Data



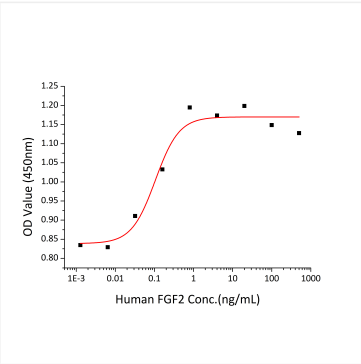
Recombinant Human FGF-2/bFGF Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 17 kDa.



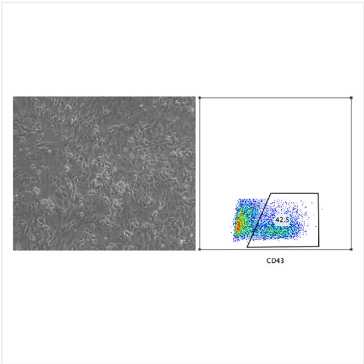
Immobilized recombinant human FGF2 at 1 μg/mL (100 μL/well) can bind recombinant human FGFR4 with a linear range of 30-125 ng/mL.



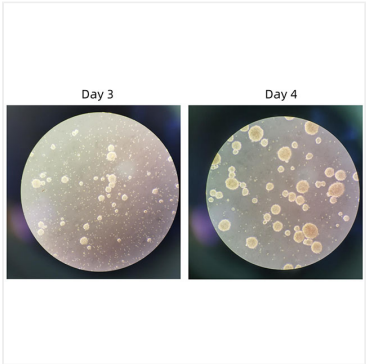
Immobilized Human FGF2 at 0.5 μg/mL (100 μL/well) can bind Human GPC3 with a linear range of 7-20ng/mL.



Recombinant Human FGF-2 promotes the proliferation of Balb3T3 mouse embryonic fibroblasts cells. The ED_{50} for this effect is 0.05-0.21 ng/mL, corresponding to a specific activity of 4.76×10^{6}~2.00×10^{7} units/mg.



Recombinant Human VEGFA(40 ng/mL, Cat. RP01162) and bFGF(50 ng/mL) induce mesoderm cells to differentiate into hematopoietic stem and progenitor cells. After 4 days induction, pebbly-like CD43+ hematopoietic stem and progenitor cells appeared in the hematogenic endothelium.(Customer feedback data)



Primary neural stem cells were cultured with a final concentration of 20 ng/mL FGF2, and as shown in the figure, the size of the suspended neural stem cells gradually increased.(Customer feedback data)