

PRODUCT INFORMATION



FGF4 (human, recombinant)

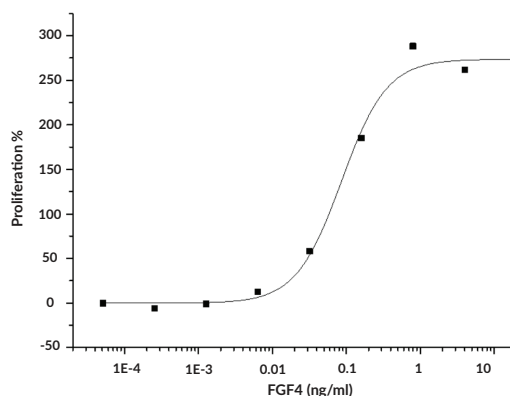
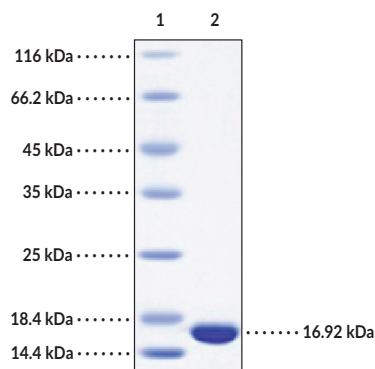
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Overview and Properties

Synonyms:	Fibroblast Growth Factor 4, HBGF-4, Heparin Secretory-Transforming Protein 1, Heparin-binding Growth Factor 4, HST-1, HSTF-1, K-FGF, Transforming Protein KS3
Source:	Active recombinant human FGF4 expressed in <i>E. coli</i>
Amino Acids:	Met1; 54-206
Uniprot No.:	P08620
Molecular Weight:	16.92 kDa
Storage:	80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4, 5% trehalose, 5% mannitol, and 0.01% Tween-80
Endotoxin Testing:	<1.0 EU/μg, determined by the LAL endotoxin assay
Bioactivity:	See figures for details
Specific Activity:	batch specific

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Measured in a Cell proliferation assay using Balb/c 3T3 mouse fibroblasts. The EC₅₀ value for this effect is typically 0.04-0.2 ng/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Fibroblast growth factor 4 (FGF4) is a secreted protein and member of the FGF4 subfamily and is involved in development.¹ It is composed of an N-terminal signaling peptide, heparin-binding sites, and a receptor-binding domain.^{1,2} FGF4 is expressed in both epithelial and mesenchymal cells and, once secreted, binds to Ig-like domain IIIc on FGFR1, FGFR2, and FGFR3.³ FGF4 is required for embryonic development and is involved in limb and cardiac valve development, as well as the proliferation and differentiation of stem cells and many other processes.^{1,4,5} Cayman's FGF4 (human, recombinant) protein can be used for cell-based assays. The protein was synthesized from a DNA sequence encoding the mature form of FGF4 (Ser54-Leu206) with an N-terminal translation-initiating methionine (Met1). The expressed protein consists of 154 amino acids, has a calculated molecular weight of 16.92 kDa, and a predicted N-terminus of Met1.

References

1. Ornitz, D.M. and Itoh, N. The Fibroblast Growth Factor signaling pathway. *Wiley Interdiscip. Rev. Dev. Biol.* **4**(3), 215-266 (2015).
2. Bellosta, P., Iwahori, A., Plotnikov, A.N., *et al.* Identification of receptor and heparin binding sites in fibroblast growth factor 4 by structure-based mutagenesis. *Mol. Cell. Biol.* **21**(17), 5946-5957 (2001).
3. Ornitz, D.M., Xu, J., Colvin, J.S., *et al.* Receptor specificity of the fibroblast growth factor family. *The J. Biol. Chem.* **271**(25), 15292-15297 (1996).
4. Kosaka, N., Sakamoto, H., Terada, M., *et al.* Pleiotropic function of FGF-4: Its role in development and stem cells. *Dev. Dyn.* **238**(2), 265-276 (2009).
5. Sugi, Y., Ito, N., Szebenyi, G., *et al.* Fibroblast growth factor (FGF)-4 can induce proliferation of cardiac cushion mesenchymal cells during early valve leaflet formation. *Dev. Biol.* **258**(2), 252-263 (2003).

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