

Revision 1

Store at -20C
#53943

Human FGF-4 Recombinant Protein

25 µg



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MW (kDa):
19.4

UniProt ID:
P08620

Entrez-Gene Id:
2249

Background

FGF-4 is a member of the large and diverse fibroblast growth factor (FGF) family of peptide growth factors. FGF-4 functions as a signaling molecule that is involved in many important processes (1,2). FGF-4 binds to FGFR1 and is required for cardiac gene expression, particularly during second heart field (SHF) proliferation and chamber formation in cooperation with the Sonic hedgehog gene (*Shh*) during heart development (3,4). FGF-4 knockout mice showed developmental defects in embryos thus suggesting that FGF-4 facilitates survival and growth of the inner cell mass during the postimplantation phase of development (1). Since FGFs are involved in gastrointestinal development, upregulation of FGF-4 in pluripotent stem cells has been used to direct their differentiation for the generation of intestinal organoids *in vitro* (5).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hFGF-4.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human FGF-4 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hFGF-4 was determined in an NR6R-3T3 cell proliferation assay. The ED₅₀ of each lot is less than or equal to 5 ng/mL.

Storage

Human FGF-4 Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/mL which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References

1. Feldman, B. et al. (1995) *Science* 267, 246-9.
2. Yuan, H. et al. (1995) *Genes Dev* 9, 2635-45.
3. Powers, C.J. et al. (2000) *Endocr Relat Cancer* 7, 165-97.
4. Dell'Era, P. et al. (2003) *Circ Res* 93, 414-20.
5. Lancaster, M.A. and Knoblich, J.A. (2014) *Science* 345, 1247125.

APPLICATIONS KEY

CROSS-REACTIVITY KEY H: human M: mouse R: rat Hm: hamster Mk: monkey
Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish
B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse
Rab: rabbit All: all species expected

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