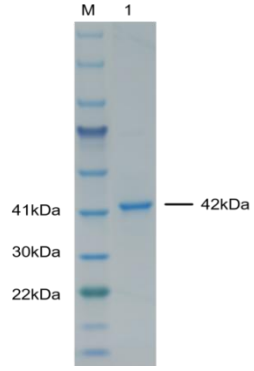
Human Fibroblast Growth Factor 9 (FGF9) Protein, Recombinant

1. For Sale

Product Name	Catalog #	Size
Human Fibroblast Growth Factor 9 (FGF9) Protein, Recombinant	P01F0073P-T2	10ug
		50ug
		500ug
		1mg

2. Product Description

Other Names	GAF, HBFG-9, HBGF-9, SYNS3
Protein & NCBI Number	P31371, NP_002001.1
Host	E.coli
Express Region	Met1-Ser208
Protein Sequence	MAPLGEVGNYFGVQDAVPFGNVPVLPVDSPVLLSDHLGQSEAGGLPRGPAVTD LDHLKGILRRRQLYCRTGFHLEIFPNGTIQGTRKDHSRFGILEFISIAVGLVSIRGV DSGLYLGMNEKGELYGSEKLTQECVFREQFEENWYNTYSSNLYKHVDTGRRY YVALNKDGTPREGTRTKRHQKFTHFLPRPVDPDKVPELYKDILSQS
Molecular Weight	The protein consists of 357 amino acids (including the fusion tag), with a predicted molecular weight of 39.9kDa and an actual molecular weight of approximately 42 kDa.
Fusion Tag	6×His-SUMO (N-terminus)
Purity	≥95% SDS-PAGE
Physical Property	Liquid
components	0.01M PBS+20% glycerol, sterile solution.
Storage & Stability	After aliquoting, the stability of the samples can be maintained for up to 6 months at -20°C to -80°C, avoiding repeated freeze-thaw cycles.
Applications	Antibody preparation, immunoassay (ELISA, WB), subcellular localization and interaction protein identification, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products
Figure. SDS-PAGE	 Bis-Tris (MOPS) SDS-PAGE

3. Storage and Transportation

Transport at 2-8°C, product is stable for up to twelve months from date of receipt under sterile conditions at -20°C to -80°C.

4. Notes

This product is for research use only. Please wear laboratory attire and disposable gloves when handling.

5. Background

FGF family members exhibit extensive mitogenic and cell survival activities, playing roles in various biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. FGF9, as a secreted factor, was isolated and shown to stimulate growth in cultured glial cells. In the nervous system, FGF9 is primarily produced by neurons and may play an important role in the development of glial cells.

In vivo, FGF9 is involved in processes such as cell proliferation, differentiation, and developmental regulation. It plays critical roles in neurodevelopment, angiogenesis, skeletal development, as well as muscle and cartilage repair. Additionally, it has the ability to promote angiogenesis, wound healing, and tissue regeneration.

The role of FGF9 in sex determination begins with its expression in the bipotential gonads. Once activated by SOX9, FGF9 forms a feedforward loop with SOX9, thereby increasing the levels of both genes. This positive feedback loop upregulates SOX9 and simultaneously inactivates the female Wnt4 signaling pathway.

6. References

1) Zhang X, Ibrahimi OA, Olsen SK, Umemori H, Mohammadi M, Ornitz DM. Receptor specificity of the fibroblast growth factor family. The complete mammalian FGF family. J Biol Chem. 2006 Jun 9;281(23):15694-700.

2) Ornitz DM, Xu J, Colvin JS, McEwen DG, MacArthur CA, Coulier F, Gao G, Goldfarb M. Receptor specificity of the fibroblast growth factor family. J Biol Chem. 1996 Jun 21;271(25):15292-7.

3) Wu XL, Gu MM, Huang L, Liu XS, Zhang HX, Ding XY, Xu JQ, Cui B, Wang L, Lu SY, Chen XY, Zhang HG, Huang W, Yuan WT, Yang JM, Gu Q, Fei J, Chen Z, Yuan ZM, Wang ZG. Multiple synostoses syndrome is due to a missense mutation in exon 2 of FGF9 gene. Am J Hum Genet. 2009 Jul;85(1):53-63.

4) Plotnikov AN, Eliseenkova AV, Ibrahimi OA, Shriver Z, Sasisekharan R, Lemmon MA, Mohammadi M. Crystal structure of fibroblast growth factor 9 reveals regions implicated in dimerization and autoinhibition. J Biol Chem. 2001 Feb 9;276(6):4322-9.

5) Zhang X, Ibrahimi OA, Olsen SK, Umemori H, Mohammadi M, Ornitz DM. Receptor specificity of the fibroblast growth factor family. The complete mammalian FGF family. J Biol Chem. 2006 Jun 9;281(23):15694-700.