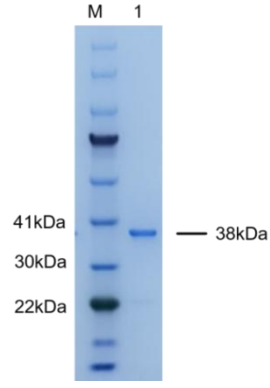
Human Fibroblast Growth Factor 10 (FGF10) Protein, Recombinant

1. For Sale

Product Name	Catalog #	Size
Human Fibroblast Growth Factor 10 (FGF10) Protein, Recombinant	P01F0221P-T2	10ug
		50ug
		500ug
		1mg

2. Product Description

Other Names	Fibroblast growth factor 10，KGF-2，Keratinocyte growth factor 2
Protein & NCBI Number	O15520
Host	E.coli
Express Region	Gln38-Ser208
Protein Sequence	QDMVSPEATNSSSSSFSSPSSAGRHVRSYNHLQGDVRWRKLFSFTKYFLKIEKN GKVSGTKKENCPYSILEITSVEIGVVAVKAINSNYYLAMNKKGKLYGSKEFNND CKLKERIEENGYNTYASFNWQHNGRQMYVALNGKGAPRRGQKTRRKNTSAHF LPMVVHS
Molecular Weight	The protein consists of 319 amino acids (including the fusion tag), with a predicted molecular weight of 35.7kDa, and an actual molecular weight of approximately 38kDa.
Fusion Tag	6×His-SUMO (N-terminus)
Purity	≥90% 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

Fibroblast Growth Factor 10 (FGF10) is a member of the fibroblast growth factor (FGF) family, classified under the FGF7 subfamily. It shares structural similarities with other members such as FGF3, FGF7, and FGF22. FGF10 is a basic protein growth factor (bFGF) secreted by subcutaneous stromal cells and specifically stimulates various physiological processes in epithelial cells, including metabolism, regeneration, differentiation, and migration. During embryonic development, FGF10 plays a critical role in the morphogenesis of organs such as the lungs, mammary glands, prostate, and salivary glands, by promoting lung bud branching and glandular formation. It activates the MAPK signaling pathway to enhance cell proliferation and migration and engages the PI3K/Akt pathway to inhibit apoptosis and promote cell survival. FGF10 also interacts with cofactors such as heparan sulfate proteoglycans (HSPGs) and Klotho proteins to enhance signaling efficiency.

FGF10 shows significant clinical potential. In chronic wounds, such as diabetic ulcers, it accelerates healing by promoting angiogenesis and epithelial regeneration. In neurodegenerative diseases like Parkinson's disease and Alzheimer's disease, it supports neuronal survival. While some members of the FGF family are implicated in tumorigenesis, targeted regulation of FGF10 may offer promising therapeutic strategies.

6. References

1) Zhao J, Zhang L, Zhang Y, Cao M, Wang C, Hu A, Cao L, Luo Q, You Z, Ma X, Gong L, Zhang C, Li H. FGF7 and FGF10 Promote Fate Transition of Human Epidermal Cell-derived Organoids to an Eccrine Gland Phenotype. Int J Biol Sci. 2024 Aug 1;20(11):4162-4177.

2) Peng W, Song Y, Zhu G, Zeng Y, Cai H, Lu C, Abuduxukuer Z, Song X, Gao X, Ye L, Wang J, Jin M. FGF10 attenuates allergic airway inflammation in asthma by inhibiting PI3K/AKT/NF-κB pathway. Cell Signal. 2024 Jan;113:110964.

3) Oeurn K, Jusakul A, Jaidee R, Kukongviriyapan V, Senggunprai L, Prawan A, Kongpetch S. FGF10/FGFR2 Signaling: Therapeutically Targetable Vulnerability in Ligand-responsive Cholangiocarcinoma Cells. In Vivo. 2023 Jul-Aug;37(4):1628-1637.

4) Jiang T, Hu W, Zhang S, Ren C, Lin S, Zhou Z, Wu H, Yin J, Tan L. Fibroblast growth factor 10 attenuates chronic obstructive pulmonary disease by protecting against glycocalyx impairment and endothelial apoptosis. Respir Res. 2022 Oct 1;23(1):269.