Data Sheet (Cat.No.TMPY-01061)

TargetMol

FGF-10 Protein, Human, Recombinant

General Information

Synonyms:	fibroblast growth factor 10;KGF2
Protein Construction:	A DNA sequence encoding the mature form of human FGF10 (NP_004456.1) (Gln38-Ser208) was expressed. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	O15520
Molecular Weight:	19.46 kDa (predicted); 19.46 kDa (reducing conditions)

QC Testing

Biological Activity:	1. Measured in a cell proliferation assay using BaF3 mouse pro-B cells transfected with human FGFR2b. The ED50 for this effect is typically 3-30 ng/mL. 2. Human lung cancer organoids were cultured with FGF2 (Cat#TMPY-00749), FGF4 (Cat#TMPY-05004), FGF7 (Cat#TMPY-00403), EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626). 3. Human lung organoids were cultured with FGF2 (Cat#TMPY-00749), FGF4 (Cat#TMPY-05004), FGF7 (Cat#TMPY-00403), EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626). 4. Human cholangiocarcinomas organoids were cultured with FGF2 (Cat#TMPY-00749), HGF (Cat#TMPY-02327), FGF7 (Cat#TMPY-00403), EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626). 5. Human liver cancer organoids were cultured with FGF2 (Cat#TMPY-00749), HGF (Cat#TMPY-02327), FGF7 (Cat#TMPY-00403), EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), TGFB1 (Cat#TMPY-02638), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626). 6. Human kidney cancer organoids were cultured with FGF2 (Cat#TMPY-00749), FGF7 (Cat#TMPY-00403), EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626). 7. Human kidney organoids were cultured with FGF7 (Cat#TMPY-00403), EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626), HGF (Cat#TMPY-02327), FGF4 (Cat#TMPY-05004). 8. Human gastric cancer organoids were cultured with EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626). 9. Human stomach organoids organoids were cultured with EGF (Cat#TMPY-03701), FGF10 (Cat#TMPY-01061), NOG (Cat#TMPY-02594), RSPO1 (Cat#TMPY-03626). 10. Human small intestinal organoids were cultured with IL22 (Cat#TMPY-03490), FGF10 (Cat#TMPY-01061), EGF (Cat#TMPY-03701), NOG (Cat#TMPY-02594).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 5 EU/mg of the protein.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Fibroblast growth factor 10 (FGF10) is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. FGF10 exhibits mitogenic activity for keratinizing epidermal cells, but essentially no activity for fibroblasts, which is similar to the biological activity of FGF7. FGF10 plays an important role in the regulation of embryonic development, cell proliferation and cell differentiation. FGF10 is required for normal branching morphogenesis. It may play a role in wound healing. Defects in FGF10 are the cause of autosomal dominant aplasia of lacrimal and salivary glands (ALSG). ALSG has variable expressivity, and affected individuals may have aplasia or hypoplasia of the lacrimal, parotid, submandibular and sublingual glands and absence of the lacrimal puncta. The disorder is characterized by irritable eyes, recurrent eye infections, epiphora (constant tearing) and xerostomia (dryness of the mouth), which increases the risk of dental erosion, dental caries, periodontal disease and oral infections.

Reference

Sekine K,et al.(1999) Fgf10 is essential for limb and lung formation. Nat Genet. 21(1): 138-41.
Ohuchi H,et al.(2000) FGF10 acts as a major ligand for FGF receptor 2 IIIb in mouse multi-organ development. Biochem Biophys Res Commun. 277(3): 643-9.
Bellusci S,et al.(1997) Fibroblast growth factor 10 (FGF10) and branching morphogenesis in the embryonic mouse lung. Development. 124(23): 4867-78.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481