Recombinant Human FGF-20 protein(His Tag)

Catalog Number: PKSH034160

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Species	Human
Source	E.coli-derived Human FGF-20 protein Pro 3-Thr 211, with an C-terminal His
Calculated MW	24.2 kDa
Observed MW	24 kDa
Accession	Q9NP95
Bio-activity	Measure by its ability to induce 3T3 cells proliferation.The ED_{50} for this effect is 1.3-3.2 ng/mL.The specific activity of recombinant human FGF-20 is > 2 x 10^5 IU/mg.

Properties

Purity	> 98 % as determined by reducing SDS-PAGE.
Endotoxin	< 0.1 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS,pH 8.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Background

Fibroblast growth factor 20 (FGF-20) is a member of the FGF gene family, which currently contains 22 members. Based on its structure, it is further classified as an FGF-9 subfamily member. All FGF family members are heparin-binding growth factors with a 120 amino acid (aa) core FGF domain that exhibits a beta -trefoil structure. The cDNA of FGF-20 predicts a 211 aa polypeptide without a canonical signal peptide sequence, a feature shared with other members of this subfamily. Nevertheless, it is secreted with a molecular weight of 27 kDa. FGF-20 is known to bind to heparin. No alternate splice forms have been reported. However, three amino acid polymorphisms are known, and single nucleotide polymorphisms in noncoding regions that may effect expression show a strong correlation with a risk of developing Parkinson's disease. Human FGF-20 shows 98% aa identity to bovine FGF-20 and 95% aa identity to both rat and mouse FGF-20. Within the FGF-9 subfamily, FGF-20 is 69% and 63% aa identical to human FGF-9 and FGF-16, respectively. Human FGF-20 is reported to be promiscuous in its selection of receptors which include FGF R1c, FGF R2c, FGF R3b, FGF R3c and FGF R4. FGF-20 is expressed a variety of cells, including dopaminergic neurons, fibroblasts, keratinocytes and breast epithelium, and multiple sites in the fetus. Finally, the expression of FGF-20 and DKK-1 is regulated by beta -catenin during development and tumorigenesis, implying that FGF-20 may play a role in the oncogenesis induced by the Wnt signaling pathway.

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