

FGF-19, human recombinant protein

Information

Gene ID	9965
Accession #	O95750
Alternate Names	
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 21.8 kDa, a single non-glycosylated polypeptide chain containing 195 amino acids.
AA Sequence	MRPLAFSDAG PHVHYGWGDP IRLRHLYTSG PHGLSSCFLR IRADGVVDCA RGQSAHSLLE IKAVALRTVA IKGVHSVRYL CMGADGKMQG LLQYSEEDCA FEEEIRPDGY NVYRSEKHLR PVSLSAKQR QLYKNRGFLP LSHFLPMLPM VPEEPEDLRG HLESDMFSSP LETDSMDPFG LVTGLEAVRS PSFEK
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Assay #1: Fully biologically active when compared to standard. The biological activity is measured by its binding ability in a functional ELISA. Immobilized rHuFGF R4 at 5 µg/ml can bind rHuFGF-19 with a linear range of 3-200 ng/ml. Assay #2: Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using murine Balb/c 3T3 cells is less than 150 ng/ml, corresponding to a specific activity of > 6.7 × 10 ³ IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5 µg	100 µg	500 µg
FGF-19, human recombinant protein	5 µg	100 µg	500 µg

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Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuFGF-19 as determined by LAL method.

Description

Human FGF-19 is encoded by the FGF19 gene. FGF-19 belongs to the FGF-19 subfamily which has three members FGF-19, 21, 23. FGFs are classically considered to be paracrine factors and are known for their roles in tissue patterning and organogenesis during embryogenesis. By contrast, the FGF-19 subfamily has recently been shown to function in an endocrine manner. Members of this subfamily have poor ability of binding to heparin binding site which is a crucial factor in ligand-receptor complex formation. β -Klotho has been identified as co-factor required for FGF-19, 21, 23 signaling. It can obviously increase ligand-receptor affinity. Unlike most FGFs which bind to and activate more than one FGF receptor, FGF19 is a specific ligand for FGF R4. In FGF-19 transgenic mice, reducing liver triglycerides, increasing fatty acid oxidation, reducing glucose levels and improving insulin sensitivity can be observed.

Reference

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4. Fu L, John LM, Adams SH, et al. 2004. Endocrinology. 145:2594-603.
5. Kharitonov A, Shiyanova TL, Koester A, et al. 2005. J Clin Invest. 115:1627-35.
6. Kurosu H, Kuro OM. 2009. Mol Cell Endocrinol. 299:72-8.
7. Lin BC, Wang M, Blackmore C, et al. 2007. J Biol Chem. 282:27277-84.
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APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

