CREATIVE BIOMART®
Cosmetic Ingredients

Recombinant Human Fibroblast Growth Factor 19

Product Information

Cat

CGF-060

Product Name

Recombinant Human Fibroblast Growth Factor 19

GeneID

9965

Source

Escherichia coli.

Molecular Weight

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 NVYRSEKHRL PVSLSSAKQR QLYKNRGFLP LSHFLPMLPM VPEEPEDLRG HLESDMFSSP LETDSMDPFG LVTGLEAVRS PSFEK

Purity

> 95 % by SDS-PAGE and HPLC analyses.

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 ED50 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 × 103 IU/mg.

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Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.

Endotoxin

Less than 1 EU/μg of rHuFGF-19 as determined by LAL method.

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.

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.

Usage

This material is offered by Creative Biomart for research, For research and further manufacturing use only.

background

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

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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.

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