

Recombinant Human Fibroblast Growth Factor 23

#R00117

Size: 5 µg/100 µg/500 µg

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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Human FGF-23 belongs to the FGF-19 subfamily which has three members FGF-19, 21, 23. All FGF family members are heparin binding growth factors with a core 120 amino acid (a.a.) FGF domain that allows for a common tertiary structure. They 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. FGF-23 is most highly expressed in bone, from which it circulates through the blood to regulate vitamin D and phosphate metabolism in kidney.

AA Sequence

YPNASPLLGSSWGGLIHLTYTATARNSYHLQIHKNGHV
DGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDF
RGNIFGSHYFDPENCRFQHQTLNGYDVYHSPQYHF
LVSLGRAKRAFLPGMNPPPYQFLSRRNEIPLHFNT
PIPRRHTRSAEDDSERDPLNVLKPRARMTPAPASCS
QELPSAEDNSPMASDPLGVVRGGRVNTAGGTGPE
GCRPFAKFI

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.

Product Specification

Accession	Q9GZV9
GeneID	8074
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 25.3 kDa, a single non-glycosylated polypeptide chain containing 227 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by thymidine uptake assay using FGF-receptors transfected BaF3 cells is less than 0.5 µg/ml, corresponding to a specific activity of > 2.0 × 10 ³ IU/mg in

the presence of 0.3 µg/ml of
rMuKlotho and 10 µg/ml of
heparin.

**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-23 as determined by
LAL method.