

Recombinant Human FGF-23

Information

Gene ID	8074
Accession #	Q9GZV9
Alternate Names	TNFRSF17, BCM, CD269
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 25.3 kDa, a single non-glycosylated polypeptide chain containing 227 amino acids.
AA Sequence	YPNASPLLGS SWGGLIHLYT ATARNSYHLQ IHKNGHVDGA PHQTIYSALM IRSEDAGFVV ITGVMSRRYL CMDFRGNIFG SHYFDPENCR FQHQTLENGY DVYHSPQYHF LVSLGRAKRA FLPGMNPPPY SQFLSRRNEI PLIHFNTPIP RRHTRSAEDD SERDPLNLVK PRARMTPAPA SCSQELPSAE DNSPMASDPL GVVRRGGRVNT HAGGTGPEGC RPFKFI
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	Fully biologically active when compared to standard. The ED50 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.
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
Recombinant Human FGF-23	5 µg	100 µg	500 µg

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Quality Control

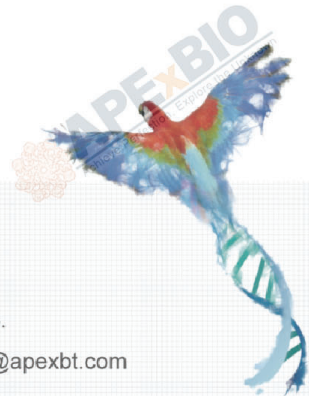
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuFGF-23 as determined by LAL method.

Description

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.

Reference

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3. Kharitonov A, Shiyanova TL, Koester A, et al. 2005. J Clin Invest. 115:1627-35.
4. Kurosu H, Kuro OM. 2009. Mol Cell Endocrinol. 299:72-8.
5. Lin BC, Wang M, Blackmore C, et al. 2007. J Biol Chem. 282:27277-84.
6. Kharitonov A, Dunbar JD, Bina HA, et al. 2008. J Cell Physiol. 215:1-7.
7. Riminucci M, Collins MT, Fedarko NS, et al. 2003. J Clin Invest. 112:683-92.
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