Animal-Free FGF-23 Protein, Human (His)

Cat. No.:	HY-P700064AF
Synonyms:	FGF-23; Phosphatonin; Tumor-derived hypophosphatemia-inducing factor
Species:	Human
Source:	E. coli
Accession:	Q9GZV9 (Y25-F251)
Gene ID:	8074
Molecular Weight:	Approximately 26.27 kDa

PROPERTIES

AA Sequence	M Y P N A S P L L G S S W G G L I H L Y T A T A R N S Y H L Q I H K N G H V D G A P H Q T I Y S A L M I R S E D A G F V V I T G V M S R R Y L C M D F R G N I F G S H Y F D P E N C R F Q H Q T L E N G Y D V Y H S P Q Y H F L V S L G R A K R A F L P G M N P P P Y S Q F L S R R N E I P L I H F N T P I P R R H T R S A E D D S E R D P L N V L K P R A R M T P A P A S C S Q E L P S A E D N S P M A S D P L G V V R G G R V N T H A G G T G P E G C R P F A K F I
Biological Activity	Measure by its ability to induce proliferation in BaF3 cells transfected with human FGFRIIIc. The ED_{50} for this effect is <0.3 μg/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 8.0.
Endotoxin Level	<0.1 EU per 1 μg of the protein by the LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	FGF-23 protein functions as a crucial regulator of phosphate homeostasis, as evidenced by its ability to inhibit renal tubular phosphate transport through the reduction of SLC34A1 levels. Additionally, it plays a role in up-regulating EGR1 expression in the presence of KL and acts directly on the parathyroid to decrease PTH secretion. This protein is involved in the regulation of vitamin-D metabolism and acts as a negative regulator of osteoblast differentiation and matrix mineralization.

The interaction of FGF-23 with FGFR1, FGFR2, FGFR3, and FGFR4 further underscores its significance in cellular processes. Furthermore, the affinity between fibroblast growth factors (FGFs) and their receptors is enhanced by KL and heparan sulfate glycosaminoglycans, serving as crucial coreceptors in this regulatory network.

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