abcam

Product datasheet

Human FGF23 ELISA Kit ab267652

1 Image

Overview

Product name Human FGF23 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall				< 10%

Inter-assay

Sample	n	Mean	SD	CV%
Overall				< 12%

Sample type Serum, Plasma, Cell culture media

Assay type Sandwich (quantitative)

Sensitivity 0.3 ng/ml

Range 0.307 ng/ml - 75 ng/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	135	122% - 145%
Plasma	144	138% - 147%
Cell culture media	143	133% - 149%

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview Human FGF23 ELISA Kit is designed for the quantitative determination of FGF23 in cell culture supernatants, plasma and serum samples.

ΔNote: Human FGF-23 concentration is low in normal serum/plasma, and may not be detectable in this assay.

This assay employs an antibody specific for human FGF23 coated on a 96-well plate. Standards and samples are pipetted into the wells and FGF23 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-human FGF23 antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of FGF23 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

Platform Microplate

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer	1 x 25ml
350X HRP-Streptavidin Concentrate	1 x 200µl
5X Assay Diluent B	1 x 15ml
Anti-Human FGF23 coated Microplate (12 x 8 wells)	1 unit
Assay Diluent C	1 x 30ml
Biotinylated Anti-Human FGF23 Detection Antibody	2 vials
Human FGF23 Standard (Lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB Substrate Solution	1 x 12ml

Function Regulator of phosphate homeostasis. Inhibits renal tubular phosphate transport by reducing SLC34A1 levels. Upregulates EGR1 expression in the presence of KL (By similarity). Acts directly on the parathyroid to decrease PTH secretion (By similarity). Regulator of vitamin-D metabolism. Negatively regulates osteoblast differentiation and matrix mineralization.

Tissue specificity Expressed in osteogenic cells particularly during phases of active bone remodeling. In adult trabecular bone, expressed in osteocytes and flattened bone-lining cells (inactive osteoblasts).

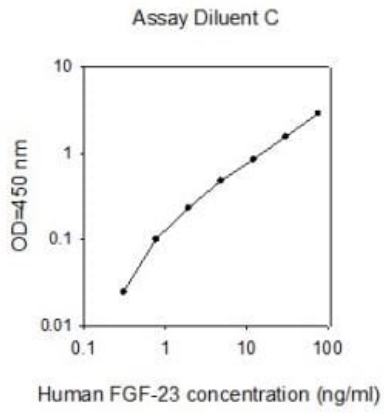
Involvement in disease Defects in FGF23 are the cause of autosomal dominant hypophosphataemic rickets (ADHR) [MIM:193100]. ADHR is characterized by low serum phosphorus concentrations, rickets, osteomalacia, leg deformities, short stature, bone pain and dental abscesses.
Defects in FGF23 are a cause of hyperphosphatemic familial tumoral calcinosis (HFTC) [MIM:211900]. HFTC is a severe autosomal recessive metabolic disorder that manifests with hyperphosphatemia and massive calcium deposits in the skin and subcutaneous tissues.

Sequence similarities Belongs to the heparin-binding growth factors family.

Post-translational modifications Following secretion this protein is inactivated by cleavage into a N-terminal fragment and a C-terminal fragment. The processing is effected by proprotein convertases.
O-glycosylated by GALT3. Glycosylation is necessary for secretion; it blocks processing by

	proprotein convertases when the O-glycan is alpha 2,6-sialylated. Competition between proprotein convertase cleavage and block of cleavage by O-glycosylation determines the level of secreted active FGF23.
Cellular localization	Secreted. Secretion is dependent on O-glycosylation.

Images



Standard curve

Human FGF23 ELISA kit (ab267652) Standard curve.

Data provided for demonstration purposes only. A new standard curve must be generated for each assay performed.

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