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Product datasheet

Recombinant human FGF 23 protein ab108553

1 Image

Description

Product name	Recombinant human FGF 23 protein
Biological activity	Activates ERK and FRS2alpha phosphorylation in Klotho expressing cells.
Purity	> 90 % SDS-PAGE. ab108553 is 0.2µm filtered.
Endotoxin level	< 0.100 Eu/µg
Expression system	HEK 293 cells
Accession	Q9GZV9
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	60 kDa including tags
Amino acids	25 to 251
Tags	Fc tag C-Terminus
Additional sequence information	FGF23 is cleaved between aa179 and aa180 (~40kDa).

Specifications

Our Abpromise guarantee covers the use of **ab108553** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE
Form	Liquid
Additional notes	Working aliquots are stable for up to 3 months when stored at -20°C.

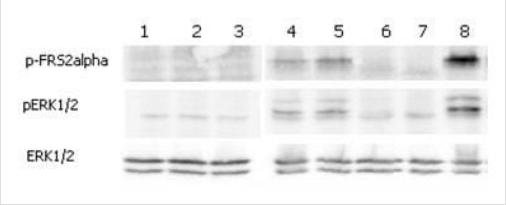
Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. Constituent: PBS This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

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



Functional Studies - Recombinant human FGF 23 protein (ab108553)

ERK and FRS2aplha phosphorylation induced by FGF 23 in Klotho expressing cells.
Klotho expressing HEK 293EBNA cells were serum starved for 16hr and then stimulated with hFGF 23-His, FGF 23-Fc (ab108553), mCD137-Fc (Fc control) and FGF-b (positive control) for 10 min, respectively.
Antibodies against pFRS2alpha, pERK1/2 & total ERK1/2 were used for immunoblotting.

Lane 1: Mock (non-treated)
Lane 2: Mock + hFGF 23-Fc (ab108553) 1µg/ml
Lane 3: Mock + hFGF 23-His 1µg/ml
Lane 4: Klotho + hFGF 23-Fc (ab108553) 1µg/ml
Lane 5: Klotho + hFGF 23-Fc (ab108553) 4µg/ml
Lane 6: Klotho + mCD137-Fc 1µg/ml
Lane 7: Klotho (non-treated)
Lane 8: Klotho + 100ng/ml FGF-b

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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