

Datasheet for ABIN2859244

FGF21 ELISA Kit



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Overview

Quantity:	96 tests
Target:	FGF21
Binding Specificity:	AA 29-210
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse FGF21
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: A29-S210
Specificity:	E.coli, A29-S210
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<10pg/mL

Product Details

Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl
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Target Details

Target:	FGF21
Alternative Name:	FGF21 (FGF21 Products)
Background:	<p>Protein Function: Stimulates glucose uptake in differentiated adipocytes via the induction of glucose transporter SLC2A1/GLUT1 expression (but not SLC2A4/GLUT4 expression). Activity probably requires the presence of KLB. .</p> <p>Background: Fibroblast growth factor 21 is a protein that in humans is encoded by the FGF21 gene. By genomic sequence analysis, Nishimura et al. (2000) identified the FGF21 gene within the 5-prime flanking region of the FUT1 gene on chromosome 19. The protein encoded by this gene is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities and are involved in a variety of biological processes including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. FGF21 stimulates glucose uptake in adipocytes but not in other cell types. This effect is additive to the activity of insulin. FGF21 treatment of adipocytes is associated with phosphorylation of FRS2, a protein linking FGF receptors to the Ras/MAP kinase pathway. FGF21 injection in ob/ob mice results in an increase in Glut1 in adipose tissue. FGF21 also protects animals from diet-induced obesity when overexpressed in transgenic mice and lowers blood glucose and triglyceride levels when administered to diabetic rodents.</p> <p>Synonyms: Fibroblast growth factor 21, FGF-21, Fgf21,</p> <p>Full Gene Name: Fibroblast growth factor 21</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	56636
UniProt:	Q9JJN1
Pathways:	RTK Signaling

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
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Application Details

Comment:	Tissue Specificity: Most abundantly expressed in the liver, also expressed in the thymus at lower levels. .
Plate:	Pre-coated
Protocol:	mouse FGF21 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for FGF21 has been precoated onto 96-well plates. Standards(E.coli,A29-S210) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for FGF21 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse FGF21 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL,1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL mouse FGF21 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse cell culture supernates, serum or plasma (heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse FGF21 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 245, Standard deviation: 11.51, CV(%): 4.7• Sample 2: n=16, Mean(pg/ml): 656, Standard deviation: 28.20, CV(%): 4.3• Sample 3: n=16, Mean(pg/ml): 1422, Standard deviation: 71.1, CV(%): 5.0,• Sample 1: n=24, Mean(pg/ml): 210, Standard deviation: 12.81, CV(%): 6.1• Sample 2: n=24, Mean(pg/ml): 670, Standard deviation: 43.55, CV(%): 6.5• Sample 3: n=24, Mean(pg/ml): 1572, Standard deviation: 99.03, CV(%): 6.3
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in: Ge, Yu, Liu, Cong, Liu, Wang, Zhou, Lin: "Characterization of bone marrow-derived mesenchymal stem cells from dimethyloxallyl glycine-preconditioned mice: Evaluation of the feasibility of dimethyloxallyl glycine as a mobilization agent." in: **Molecular medicine reports**, Vol. 13, Issue 4, pp. 3498-506, (2016) ([PubMed](#)).

Images

