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Datasheet for ABIN1889398

SPINK1 ELISA Kit

1 Image

1 Publication

Overview

Quantity:	96 tests
Target:	SPINK1
Binding Specificity:	AA 24-79
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	156-10.000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human SPINK1/TATI
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: D24-C79
Specificity:	Expression system for standard: E.coli Immunogen sequence: D24-C79
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity: <10pg/mL

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

Target Details

Target: SPINK1

Alternative Name: SPINK1 ([SPINK1 Products](#))

Background: Protein Function: This is a trypsin inhibitor, its physiological function is to prevent the trypsin-catalyzed premature activation of zymogens within the pancreas.

Background: Serine protease inhibitor Kazal-type 1, also called TATI or PSTI, is a protein that in humans is encoded by the SPINK1 gene. It is mapped to 5q32. SPINK1 gene contains 4 exons spanning approximately 7.5 kb. It was initially detected in urine of patients with ovarian cancer. This peptide is also produced by the mucosa of the gastrointestinal tract where it may protect the mucosal cells from proteolytic breakdown. The SPINK1 gene encodes pancreatic secretory trypsin inhibitor, which is secreted from pancreatic acinar cells into pancreatic juice. Its physiologic role was thought to be the prevention of trypsin-catalyzed premature activation of zymogens within the pancreas and the pancreatic duct. Mutations in this gene are associated with hereditary pancreatitis and tropical calcific pancreatitis.

Synonyms: Pancreatic secretory trypsin inhibitor, Serine protease inhibitor Kazal-type 1, Tumor-associated trypsin inhibitor, TATI, SPINK1, PSTI,

Full Gene Name: Pancreatic secretory trypsin inhibitor

Cellular Localisation: Secreted.

Gene ID: 6690

UniProt: [P00995](#)

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.

Plate: Pre-coated

Protocol: human SPINK1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent

Application Details

assay technology. A monoclonal antibody from mouse specific for SPINK1 has been precoated onto 96-well plates. Standards(E.coli, D24-C79) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for SPINK1 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 human SPINK1 amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL human SPINK1 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 human cell culture supernates, serum or plasma(heparin) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human SPINK1 standard solution and each sample be measured in duplicate.

Assay Precision:

- Sample 1: n=16, Mean(ng/ml): 1.3, Standard deviation: 0.052, CV(%): 4
- Sample 2: n=16, Mean(ng/ml): 2.7, Standard deviation: 0.138, CV(%): 5.1
- Sample 3: n=16, Mean(ng/ml): 4.8, Standard deviation: 0.274, CV(%): 5.7,
- Sample 1: n=24, Mean(ng/ml): 1.6, Standard deviation: 0.12, CV(%): 7.5
- Sample 2: n=24, Mean(ng/ml): 2.4, Standard deviation: 0.13, CV(%): 5.4
- Sample 3: n=24, Mean(ng/ml): 5.1, Standard deviation: 0.332, CV(%): 6.5

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: Zhang, Shi, Zou, Chen, Tang, Ye, Liu: "High glucose stimulates cell proliferation and Collagen IV production in rat mesangial cells through inhibiting AMPK-KATP signaling." in: **International urology and nephrology**, Vol. 49, Issue 11, pp. 2079-2086, (2018) ([PubMed](#)).

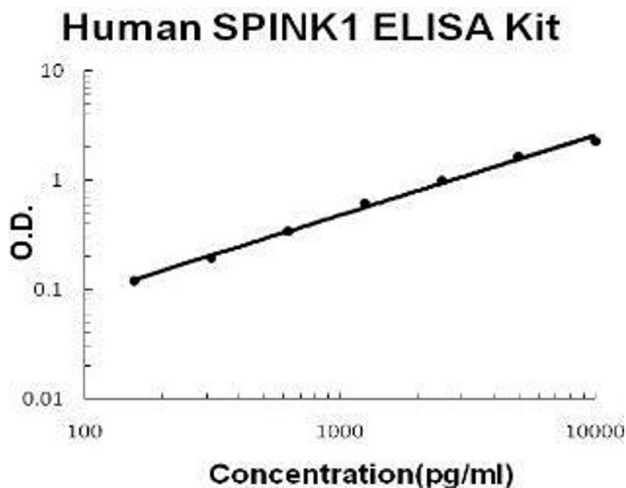
Gishto, Farrell, Kothapalli: "Tuning composition and architecture of biomimetic scaffolds for enhanced matrix synthesis by murine cardiomyocytes." in: **Journal of biomedical materials research. Part A**, Vol. 103, Issue 2, pp. 693-708, (2015) ([PubMed](#)).

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Xu, Ling, Zhu, Fan, Zhang: "The effect of 2,3,4',5-tetrahydroxystilbene-2-O- β -D glucoside on neointima formation in a rat artery balloon injury model and its possible mechanisms." in: **European journal of pharmacology**, Vol. 698, Issue 1-3, pp. 370-8, (2013) ([PubMed](#)).

Kim, Lee, Choi, Yoo, Yang: "Implication of MMP-9 and urokinase plasminogen activator (uPA) in the activation of pro-matrix metalloproteinase (MMP)-13." in: **Rheumatology international**, Vol. 32, Issue 10, pp. 3069-75, (2012) ([PubMed](#)).

Images



ELISA
Image 1. Human SPINK1/TATI PicoKine ELISA Kit standard curve