Datasheet for ABIN411344

Osteopontin ELISA Kit

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Overview

Quantity:	96 tests
Target:	Osteopontin (SPP1)
Binding Specificity:	AA 17-294
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	156-10000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse OPN
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: L17-N294
Specificity:	Expression system for standard: NSO Immunogen sequence: L17-N294
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:	Osteopontin (SPP1)
Alternative Name:	SPP1 (SPP1 Products)
Background:	Background: Osteopontin(OPN) also called urinary stone protein, secreted phosphoprotein 1(SPP1), bone sialoprotein, and early T lymphocyte activation 1(ETA1). Osteopontin is a phosphorylated glycoprotein secreted to the mineralizing extrOPNllular matrix by osteoblasts during bone development. It is believed to facilitate the attachment of osteoblasts and osteoclasts to the extrOPNllular matrix, allowing them to perform their respective functions during osteogenesis. Osteopontin is presumably involved in stone formation as stone matrix. The deduced protein sequence reveals a 317-amino acid protein(34,982 Da) containing a 16-amino acid hydrophobic signal sequence and a 33,352-Da protein destines to undergo extensive post-translational modifications before being secreted from the cell. The gene is located on human chromosome 4. The standard product used in this kit is recombinant mouse OPN, consisting of 284 amino acid sequence with the molecular mass of 31.5KDa. As a result of glycosylation, the molecular mass is 65KDa. Synonyms: Putative uncharacterized protein ,Spp1 , Full Gene Name: secreted phosphoprotein 1
Gene ID:	20750
UniProt:	Q3UBR1
Pathways:	Regulation of Cell Size

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:	mouse OPN ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay

Application Details

	technology. A monoclonal antibody from rat specific for OPN has been precoated onto 96-well plates. Standards(NSO, L17-N294) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for OPN 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 OPN amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL mouse OPN 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, plasma(heparin, EDTA) or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse OPN standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 1243, Standard deviation: 97, CV(%): 7.8 • Sample 2: n=16, Mean(pg/ml): 3386, Standard deviation: 210, CV(%): 6.2 • Sample 3: n=16, Mean(pg/ml): 5637, Standard deviation: 304.4, CV(%): 5.4, • Sample 1: n=24, Mean(pg/ml): 1448, Standard deviation: 124.6, CV(%): 8.6 • Sample 2: n=24, Mean(pg/ml): 3563, Standard deviation: 295.8, CV(%): 8.3 • Sample 3: n=24, Mean(pg/ml): 6125, Standard deviation: 520.6, CV(%): 8.5
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

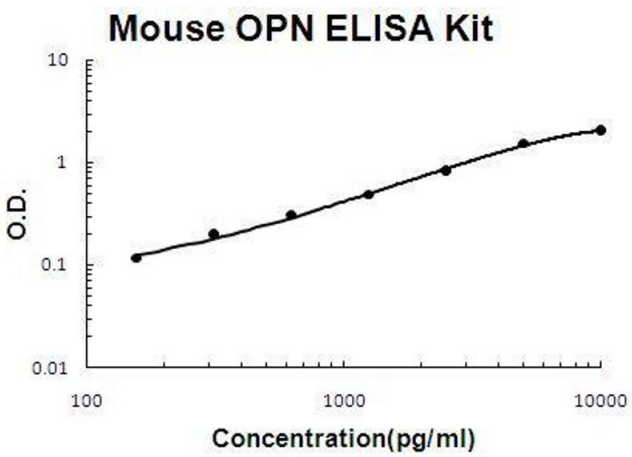
Product cited in:	Sai, Yao, Shen, Zheng, Sun, Wu, Wang, Yao: "Dynamic expression of hepatic GP73 mRNA and protein and circulating GP73 during hepatocytes malignant transformation." in: **Hepatobiliary & pancreatic diseases international : HBPD INT**, Vol. 19, Issue 5, pp. 449-454, (2020) (PubMed).

Publications

Dong, Chen, Li, Li, Wen, Lin, Ma, Wei, Chen, Ruan, Lin, Wang, Wu, Wu: "Serum Golgi protein 73 is a prognostic rather than diagnostic marker in hepatocellular carcinoma." in: **Oncology letters**, Vol. 14, Issue 5, pp. 6277-6284, (2017) (PubMed).

Kosanam, Prassas, Chrystoja, Soleas, Chan, Dimitromanolakis, Blasutig, Rückert, Gruetzmann, Pilarsky, Maekawa, Brand, Diamandis: "Laminin, gamma 2 (LAMC2): a promising new putative pancreatic cancer biomarker identified by proteomic analysis of pancreatic adenocarcinoma tissues." in: **Molecular & cellular proteomics : MCP**, Vol. 12, Issue 10, pp. 2820-32, (2013) (PubMed).

Images



ELISA

Image 1. Mouse OPN PicoKine ELISA Kit standard curve