Datasheet for ABIN411334

MMP 9 ELISA Kit

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Overview

Quantity:	96 tests
Target:	MMP 9 (MMP9)
Binding Specificity:	AA 20-730
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 MMP-9
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: CHO Immunogen sequence: A20-P730
Specificity:	Expression system for standard: CHO Immunogen sequence: A20-P730
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<20pg/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:	MMP 9 (MMP9)
Alternative Name:	MMP9 (MMP9 Products)
Background:	Protein Function: Could play a role in bone osteoclastic resorption. Cleaves type IV and type V collagen into large C-terminal three quarter fragments and shorter N-terminal one quarter fragments (By similarity). . Background: The 92-kD type IV collagenase is also known as 92-kD gelatinase, type V collagenase, gelatinase B, or matrix metalloproteinase-9(MMP9). The 72- and 92- kDa type IV collagenases are members of a group of secreted zinc metalloproteases.1 The matrix metalloproteinases(MMPs) are able to degrade the extracellular matrix and allow angiogenesis and tumor invasion. Gelatinase B, a matrix metalloproteinase that has proteolytic activity against connective tissue proteins, has been suggested to be important in the connective tissue remodeling processes associated with atherogenesis and plaque rupture. MMP-9 is predominantly expressed in neutrophils, macrophages, and mast cells, rather than in oncogene-positive neoplastic cells. The polymorphism of MMP-9 acts as a genetic factor for the development of smoking-induced pulmonary emphysema. Synonyms: Matrix metalloproteinase-9,MMP-9,3.4.24.35,92 kDa gelatinase,92 kDa type IV collagenase,Gelatinase B,GELB,Mmp9,Clg4b, Full Gene Name: Matrix metalloproteinase-9 Cellular Localisation: Secreted, extracellular space, extracellular matrix.
Gene ID:	17395
UniProt:	P41245
Pathways:	Cellular Response to Molecule of Bacterial Origin, Positive Regulation of Immune Effector Process, CXCR4-mediated Signaling Events

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well

Application Details

	assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the peptidase M10A family.
Plate:	Pre-coated
Protocol:	mouse MMP-9 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for MMP-9 has been precoated onto 96-well plates. Standards(CHO, A20-P730) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MMP-9 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 MMP-9 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 MMP-9 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) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse MMP-9 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 1124, Standard deviation: 65.2, CV(%): 5.8 • Sample 2: n=16, Mean(pg/ml): 3855, Standard deviation: 181.2, CV(%): 4.7 • Sample 3: n=16, Mean(pg/ml): 6245, Standard deviation: 381, CV(%): 6.1, • Sample 1: n=24, Mean(pg/ml): 1376, Standard deviation: 89.44, CV(%): 6.5 • Sample 2: n=24, Mean(pg/ml): 3921, Standard deviation: 204, CV(%): 5.2 • Sample 3: n=24, Mean(pg/ml): 6534, Standard deviation: 490, CV(%): 7.5
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:

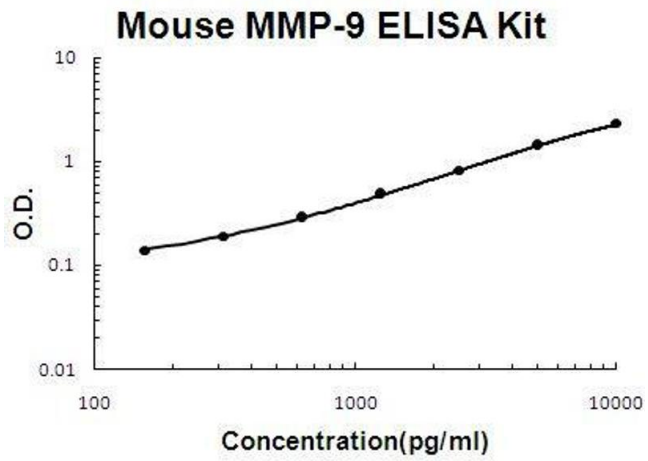
Ma, Liu, Yu, He, Li, Ma, Zhang, Xu, Ping, Li, Sun, Li: "Triglyceride is independently correlated with insulin resistance and islet beta cell function: a study in population with different glucose and lipid metabolism states." in: **Lipids in health and disease**, Vol. 19, Issue 1, pp. 121, (2020) (PubMed).

Ogłodek: "The role of PON-1, GR, IL-18, and OxLDL in depression with and without posttraumatic stress disorder." in: **Pharmacological reports : PR**, Vol. 69, Issue 5, pp. 837-845, (2018) (PubMed).

Zhou, Zhu, Cui, Feng, Zhao, He, Ping, Li, Li: "Influence of diet on leukocyte telomere length, markers of inflammation and oxidative stress in individuals with varied glucose tolerance: a Chinese population study." in: **Nutrition journal**, Vol. 15, pp. 39, (2016) (PubMed).

There are more publications referencing this product on: Product page

Validation report #102066 for ELISA (ELISA)



ELISA

Image 1. Mouse MMP-9 PicoKine ELISA Kit standard curve