Datasheet for ABIN1889318

ESM1 ELISA Kit

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Overview

Quantity:	96 tests
Target:	ESM1
Binding Specificity:	AA 20-184
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	23.4-1500 pg/mL
Minimum Detection Limit:	23.4 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse ESM1/Endocan
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: W20-R184
Specificity:	Expression system for standard: NSO Immunogen sequence: W20-R184
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:	ESM1
Alternative Name:	ESM1 (ESM1 Products)
Background:	Protein Function: Involved in angiogenesis, promotes angiogenic sprouting. May have potent implications in lung endothelial cell-leukocyte interactions (By similarity). . Background: Endothelial cell-specific molecule 1, also known as Endocan, is a protein that in humans is encoded by the ESM1 gene. This gene encodes a secreted protein which is mainly expressed in the endothelial cells in human lung and kidney tissues. The expression of this gene is regulated by cytokines, suggesting that it may play a role in endothelium-dependent pathological disorders. The transcript contains multiple polyadenylation and mRNA instability signals. ESM-1 has been described as a specific biomarker of tip cells during neoangiogenesis by independent teams. Its expression has been shown to be increase in presence of pro-angiogenic growth factors such as VEGF(vascular endothelial growth factor) or FGF-2(fibroblast growth factor 2). Synonyms: Endothelial cell-specific molecule 1,ESM-1,Esm1, Full Gene Name: Endothelial cell-specific molecule 1 Cellular Localisation: Secreted.
Gene ID:	71690
UniProt:	Q9QYY7
Pathways:	Growth Factor Binding

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 ESM1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent

Application Details

	assay technology. A monoclonal antibody from rat specific for ESM1 has been precoated onto 96-well plates. Standards(NSO, W20-R184) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for ESM1 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 ESM1 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1500pg/mL, 750pg/mL, 375pg/mL, 187.5pg/mL, 93.7pg/mL, 46.8pg/mL, 23.4pg/mL mouse ESM1 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 ESM1 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 56, Standard deviation: 1.85, CV(%): 3.3 • Sample 2: n=16, Mean(pg/ml): 673, Standard deviation: 31.6, CV(%): 4.7 • Sample 3: n=16, Mean(pg/ml): 1033, Standard deviation: 57, CV(%): 5.5, • Sample 1: n=24, Mean(pg/ml): 47, Standard deviation: 1.93, CV(%): 4.1 • Sample 2: n=24, Mean(pg/ml): 660, Standard deviation: 34.98, CV(%): 5.3 • Sample 3: n=24, Mean(pg/ml): 1135, Standard deviation: 72.64, CV(%): 6.4
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).

Publications

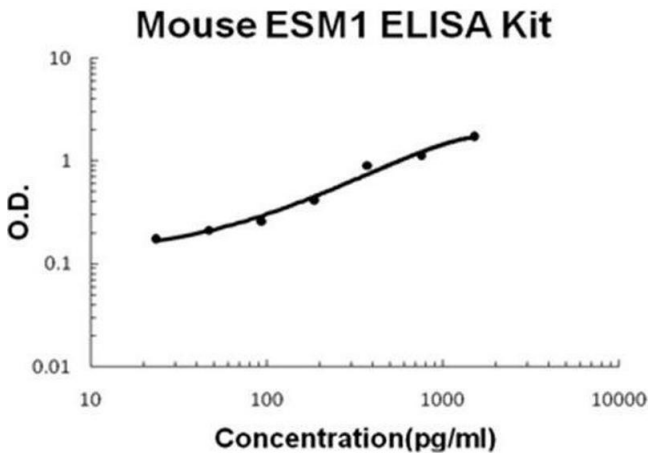
Gishto, Farrell, Kothapalli: "Tuning composition and architecture of biomimetic scaffolds for enhanced matrix synthesis by murine cardiomyocytes." in: **Journal of biomedical materials research. Part A**, Vol. 103, Issue 2, pp. 693-708, (2015) (PubMed).

Cavdar, Ozbal, Celik, Ergur, Guneli, Ural, Camsari, Guner: "The effects of alpha-lipoic acid on MMP-2 and MMP-9 activities in a rat renal ischemia and re-perfusion model." in: **Biotechnic & histochemistry : official publication of the Biological Stain Commission**, Vol. 89, Issue 4, pp. 304-14, (2014) (PubMed).

Xu, Ling, Zhu, Fan, Zhang: "The effect of 2,3,4',5-tetrahydroxystilbene-2-0-?-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. Mouse ESM1/Endocan PicoKine ELISA Kit standard curve