Datasheet for ABIN2859208

CXCL12 ELISA Kit

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Overview

Quantity:	96 tests
Target:	CXCL12
Binding Specificity:	AA 22-93
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

Product Details

Purpose:	For quantitative detection of mouse SDF-1 in cell culture supernates, serum and plasma(heparin).
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: K22-M93
Specificity:	Natural and recombinant mouse SDF-1
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Components:	• 96-well plate precoated with anti- mouse SDF-1 antibod - 1 • Lyophilized recombinant mouse SDF-1 standar - 10ng/tubex2 • Biotinylated anti- mouse SDF-1 antibod - 130ul(dilution 1:100) • Avidin-Biotin-Peroxidase Complex(ABC - 130ul(dilution 1:100) • Sample diluent buffe - 30ml • Antibody diluent buffe - 12ml • ABC diluent buffe - 12ml • TMB color developing agen - 10ml • TMB stop solutio - 10ml

Target Details

Target:	CXCL12
Alternative Name:	CXCL12 (CXCL12 Products)
Background:	SDF-1(stromal cell-derived factor-1) is small cytokine belonging to the chemokine family that is officially designated Chemokine(C-X-C motif) ligand 12(CXCL12). This gene is located on chromosome 10q11.1. SDF-1 is produced in two forms, SDF-1alpha/CXCL12a and SDF-1beta/CXCL12b, by alternate splicing of the same gene. Chemokines are characterized by the presence of four conserved cysteines, which form two disulfide bonds. The CXCL12 proteins belong to the group of CXC chemokines, whose initial pair of cysteines are separated by one intervening amino acid. CXCL12 is strongly chemotactic for lymphocytes. CXCL12 was shown to be expressed in many tissues in mice(including brain, thymus, heart, lung, liver, kidney, spleen and bone marrow). CXCL12 is a highly efficacious lymphocyte chemoattractant. In addition, CXCL12 induces intracellular actin polymerization in lymphocytes. CXCL12 is a substrate for the matrix metalloproteinase-2, which cleaves an CXCL12 N-terminal tetrapeptide. The standard product used in this kit is recombinant SDF-1 with the molecular mass of 8Kda.
Gene ID:	20315
UniProt:	H7BX38
Pathways:	Regulation of Cell Size, CXCR4-mediated Signaling Events, Negative Regulation of intrinsic apoptotic Signaling

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Plate:	Pre-coated

Application Details

Protocol:	mouse SDF-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for SDF-1 has been precoated onto 96-well plates. Standards(E.coli, K22-M93) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for SDF-1 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 SDF-1 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL mouse SDF-1 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 SDF-1 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(ng/ml): 0.67, Standard deviation: 0.027, CV(%): 4 • Sample 2: n=16, Mean(ng/ml): 1.6, Standard deviation: 0.056, CV(%): 3.5 • Sample 3: n=16, Mean(ng/ml): 2.8, Standard deviation: 0.126, CV(%): 4.5, • Sample 1: n=24, Mean(ng/ml): 0.91, Standard deviation: 0.053, CV(%): 5.8 • Sample 2: n=24, Mean(ng/ml): 2.1, Standard deviation: 0.107, CV(%): 5.4 • Sample 3: n=24, Mean(ng/ml): 3.2, Standard deviation: 0.202, CV(%): 6.3
Restrictions:	For Research Use only

Handling

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, Teng, Liu, Zhang, Liu: "Gene expression profile analyze the molecular mechanism of CXCR7 regulating papillary thyroid carcinoma growth and metastasis." in: **Journal of experimental & clinical cancer research : CR**, Vol. 34, pp. 16, (2015) (PubMed). Wu, Li, Wang, Shen, Xu, Liu, Zhuo, Xia, Gao, Tan: "Ultrasound-targeted stromal cell-derived

factor-1-loaded microbubble destruction promotes mesenchymal stem cell homing to kidneys in diabetic nephropathy rats." in: **International journal of nanomedicine**, Vol. 9, pp. 5639-51, (2014) (PubMed).

Lin, Han, Wang, Xu, Yu, Yang: "CXCR7 stimulates MAPK signaling to regulate hepatocellular carcinoma progression." in: **Cell death & disease**, Vol. 5, pp. e1488, (2014) (PubMed).

Tong, Ding, Shen, Chen, Bian, Ma, Yao, Yang: "Mesenchymal stem cell transplantation enhancement in myocardial infarction rat model under ultrasound combined with nitric oxide microbubbles." in: **PLoS ONE**, Vol. 8, Issue 11, pp. e80186, (2013) (PubMed).