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CXCL1 ELISA Kit



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Publications



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Overview

Quantity:	96 tests
Target:	CXCL1
Binding Specificity:	AA 35-107
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human CXCL1
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: A35-N107
Specificity:	Expression system for standard: E.coli Immunogen sequence: A35-N107
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Conditivity	<1ng/ml
Sensitivity:	<1pg/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:	CXCL1
Alternative Name:	CXCL1 (CXCL1 Products)
Background:	Protein Function: Has chemotactic activity for neutrophils. May play a role in inflammation and
	exerts its effects on endothelial cells in an autocrine fashion. In vitro, the processed forms GRO-
	alpha(4-73), GRO-alpha(5-73) and GRO-alpha(6-73) show a 30-fold higher chemotactic activity.
	Background: Chemokine(C-X-C motif) ligand 1(CXCL1) is a small cytokine belonging to the CXC
	chemokine family that was previously called GRO1 oncogene, GROalpha, KC, Neutrophil-
	activating protein 3(NAP-3) and melanoma growth stimulating activity, alpha(MSGA-alpha). In
	humans, this protein is encoded by the CXCL1 gene. The gene for CXCL1 is located on human
	chromosome 4 amongst genes for other CXC chemokines. The mature form of CXCL1 is
	maximally 73 amino acids long. CXCL1 is secreted by human melanoma cells, has mitogenic
	properties and is implicated in melanoma pathogenesis. CXCL1 is expressed by macrophages,
	neutrophils and epithelial cells, and has neutrophil chemoattractant activity. This chemokine
	elicits its effects by signaling through the chemokine receptor CXCR2.CXCL1 decreased the
	severity of multiple sclerosis and may offer a neuro-protective function.
	Synonyms: Growth-regulated alpha protein, C-X-C motif chemokine 1, GRO-alpha (1-
	73),Melanoma growth stimulatory activity,MGSA,Neutrophil-activating protein 3,NAP-3,GRO-
	alpha(4-73),GRO-alpha(5-73),GRO-alpha(6-73),CXCL1,GRO, GRO1, GROA, MGSA, SCYB1,
	Full Gene Name: Growth-regulated alpha protein
	Cellular Localisation: Secreted.
Gene ID:	2919
UniProt:	P09341
Pathways:	Autophagy
Application Details	
Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well

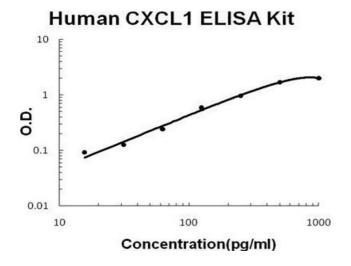
Application Details

	assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the intercrine alpha (chemokine CxC) family.
Plate:	Pre-coated
Protocol:	human CXCL1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent
	assay technology. A monoclonal antibody from mouse specific for CXCL1 has been precoated
	onto 96-well plates. Standards(E. coli, A35-N107) and test samples are added to the wells, a
	biotinylated detection polyclonal antibody from goat specific for CXCL1 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 CXCL1 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL,
	31.2pg/mL, 15.6pg/mL human CXCL1 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, EDTA,
	citrate) to each empty well. See "Sample Dilution Guideline" above for details. It is
	recommended that each human CXCL1 standard solution and each sample be measured in
	duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 83.8, Standard deviation: 3.6, CV(%): 4.3
	 Sample 2: n=16, Mean(pg/ml): 357, Standard deviation: 12.8, CV(%): 3.6
	• Sample 3: n=16, Mean(pg/ml): 723, Standard deviation: 24.6, CV(%): 3.4,
	• Sample 1: n=24, Mean(pg/ml): 95.9, Standard deviation: 5.85, CV(%): 6.1
	 Sample 2: n=24, Mean(pg/ml): 363, Standard deviation: 18.9, CV(%): 5.2 Sample 3: n=24, Mean(pg/ml): 716, Standard deviation: 45.82, CV(%): 6.4
	Sample 3.11–24, Mean(pg/1111). 7 To, Standard deviation. 43.02, 6 V(%). 0.4
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

Product cited in:

Xu, Feng, Wang, Zhu, Lin, Lou, Xiang, He, Zheng, Tang, Zuo: "Phytoestrogen calycosin-7-O-?-D-glucopyranoside ameliorates advanced glycation end products-induced HUVEC damage." in: **Journal of cellular biochemistry**, Vol. 112, Issue 10, pp. 2953-65, (2011) (PubMed).

Images



ELISA

Image 1. Human CXCL1 PicoKine ELISA Kit standard curve