

Datasheet for ABIN411394

CXCL1 ELISA Kit**1** Image**2** Publications[Go to Product page](#)

Overview

Quantity:	96 tests
Target:	CXCL1
Binding Specificity:	AA 25-96
Reactivity:	Rat
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 Rat CXCL1
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: A25-K96
Specificity:	Expression system for standard: E.coli Immunogen sequence: A25-K96
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

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:	<p>Protein Function: Has chemotactic activity for neutrophils. Contributes to neutrophil activation during inflammation.</p> <p>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.</p> <p>Synonyms: Growth-regulated alpha protein,C-X-C motif chemokine 1,Cytokine-induced neutrophil chemoattractant 1,CINC-1,Platelet-derived growth factor-inducible protein KC,Cxcl1,Cinc1, Gro, Scyb1,</p> <p>Full Gene Name: Growth-regulated alpha protein</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	81503
UniProt:	P14095
Pathways:	Autophagy

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.
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Application Details

Comment:	Tissue Specificity: At least expressed in the lung and trachea.
Plate:	Pre-coated
Protocol:	rat 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, A25-K96) 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 rat 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 rat 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 rat cell culture supernatants, serum or plasma(EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat CXCL1 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 75.4, Standard deviation: 4.1, CV(%): 5.4• Sample 2: n=16, Mean(pg/ml): 221, Standard deviation: 13.7, CV(%): 6.2• Sample 3: n=16, Mean(pg/ml): 546, Standard deviation: 28.4, CV(%): 5.2,• Sample 1: n=24, Mean(pg/ml): 98.4, Standard deviation: 6, CV(%): 6.1• Sample 2: n=24, Mean(pg/ml): 285, Standard deviation: 20.52, CV(%): 7.2• Sample 3: n=24, Mean(pg/ml): 534, Standard deviation: 31.5, CV(%): 5.9
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

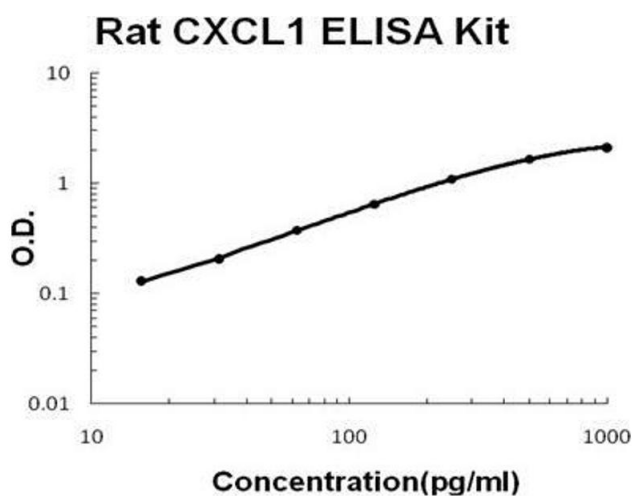
Product cited in:	Martin, Koczera, Simons, Zechendorf, Hoeger, Marx, Schuerholz: "The Human Host Defense
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Ribonucleases 1, 3 and 7 Are Elevated in Patients with Sepsis after Major Surgery--A Pilot Study." in: **International journal of molecular sciences**, Vol. 17, Issue 3, pp. 294, (2016) ([PubMed](#)).

Kasiri, Beer, Nemec, Gruber, Pietkiewicz, Haider, Simader, Traxler, Schweiger, Janik, Taghavi, Gabriel, Mildner, Ankersmit: "Dying blood mononuclear cell secretome exerts antimicrobial activity." in: **European journal of clinical investigation**, Vol. 46, Issue 10, pp. 853-63, (2016) ([PubMed](#)).

Teran, Ramirez-Jimenez, Soid-Raggi, Velazquez: "Interleukin 16 and CCL17/thymus and activation-regulated chemokine in patients with aspirin-exacerbated respiratory disease." in: **Annals of allergy, asthma & immunology : official publication of the American College of Allergy, Asthma, & Immunology**, Vol. 118, Issue 2, pp. 191-196, (2016) ([PubMed](#)).

Images



ELISA

Image 1. Rat CXCL1 PicoKine ELISA Kit standard curve