Datasheet for ABIN1889383

# CCL3 ELISA Kit

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## Overview

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| Quantity: | 96 tests |
| Target: | CCL3 |
| Binding Specificity: | AA 24-92 |
| Reactivity: | Rat |
| Method Type: | Sandwich ELISA |
| Detection Range: | 7.8-500 pg/mL |
| Minimum Detection Limit: | 7.8 pg/mL |
| Application: | ELISA |

## Product Details

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| Purpose: | Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat MIP-1alpha/CCL3 |
| 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<br>Immunogen sequence: A24-A92 |
| Specificity: | Expression system for standard: E.coli<br>Immunogen sequence: A24-A92 |
| Cross-Reactivity (Details): | There is no detectable cross-reactivity with other relevant proteins. |

## Product Details

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| 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

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| Target: | CCL3 |
| Alternative Name: | CCL3 (CCL3 Products) |
| Background: | Protein Function: Monokine with inflammatory and chemokinetic properties. Has chemotactic activity for monocytes, neutrophils, eosinophils, basophils, and lymphocytes. Required for lung TNF-alpha production, neutrophil recruitment and subsequent lung injury and may function as an autocrine mediator for the macrophage production of TNF-alpha which in turn up-regulates vascular adhesion molecules required for neutrophil influx. This protein binds heparin.<br>Background: Macrophage inflammatory protein-1 alpha(MIP-1 alpha), also called CCL3, LD78. The cDNA for MIP-1 alpha predicts a mature peptide of 69 amino acids with a molecular mass of 7,889 daltons. LD78 is a member of a newly identified superfamily of small inducible proteins involved in inflammatory responses, wound healing and tumorigenesis. MIP-1 alpha is a chemokine that has pro-inflammatory and stem cell inhibitory activities in vitro. It constitutes an important second signal for mast cell degranulation in the conjunctiva in vivo and consequently for acute-phase disease.<br>Synonyms: C-C motif chemokine 3,Macrophage inflammatory protein 1-alpha,MIP-1-alpha,Small-inducible cytokine A3,Ccl3,Mip1a, Scya3,<br>Full Gene Name: C-C motif chemokine 3<br>Cellular Localisation: Secreted. |
| Gene ID: | 25542 |
| UniProt: | P50229 |
| Pathways: | Cellular Response to Molecule of Bacterial Origin, Autophagy |

## Application Details

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| 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. |

## Application Details

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| Plate: | Pre-coated |
| Protocol: | rat MIP-1 alpha ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for MIP-1 alpha has been precoated onto 96-well plates. Standards(E.coli, A24-A92) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MIP-1 alpha 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 MIP-1 alpha amount of sample captured in plate. |
| Assay Procedure: | Aliquot 0.1 mL per well of the 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.3pg/mL, 15.6pg/mL, 7.8pg/mL rat MIP-1α 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 supernates, serum or plasma(heparin, EDTA, citrate) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat MIP-1α standard solution and each sample be measured in duplicate. |
| Assay Precision: | • Sample 1: n=16, Mean(pg/ml): 53, Standard deviation: 2.76, CV(%): 5.2<br>• Sample 2: n=16, Mean(pg/ml): 177, Standard deviation: 11.86, CV(%): 6.7<br>• Sample 3: n=16, Mean(pg/ml): 293, Standard deviation: 13.2, CV(%): 4.5,<br>• Sample 1: n=24, Mean(pg/ml): 65, Standard deviation: 4.1, CV(%): 6.3<br>• Sample 2: n=24, Mean(pg/ml): 192, Standard deviation: 14.6, CV(%): 7.6<br>• Sample 3: n=24, Mean(pg/ml): 317, Standard deviation: 18.4, CV(%): 5.8 |
| Restrictions: | For Research Use only |

## Handling

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| 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

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| Product cited in: | Li, Hu, Wang, Zhang, Zhou, Yang, Li, Xiong, Liu, Li, Wu, Zheng: "Autophagy-dependent generation of Axin2+ cancer stem-like cells promotes hepatocarcinogenesis in liver cirrhosis." in: |

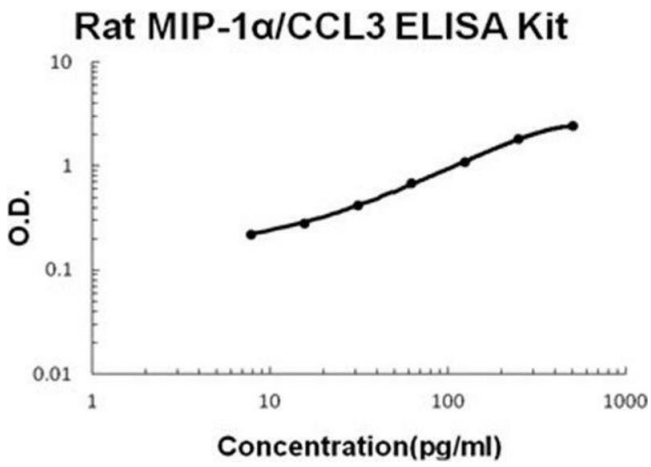
## Publications

**Oncogene**, Vol. 36, Issue 48, pp. 6725-6737, (2017) (PubMed).

Yang, Wu, Feng, Huang, Liu, Liu, Chen: "Vitamin C plus hydrogel facilitates bone marrow stromal cell-mediated endometrium regeneration in rats." in: **Stem cell research & therapy**, Vol. 8, Issue 1, pp. 267, (2017) (PubMed).

Secchiero, Corallini, Zavan, Tripodo, Vindigni, Zauli: "Mesenchymal stem cells display hepato-protective activity in lymphoma bearing xenografts." in: **Investigational new drugs**, Vol. 30, Issue 2, pp. 803-7, (2012) (PubMed).

## Images




**ELISA**

**Image 1.** Rat MIP-1alpha/CCL3 PicoKine ELISA Kit standard curve