Datasheet for ABIN921059

GM-CSF ELISA Kit

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Overview

Quantity:	96 tests
Target:	GM-CSF (CSF2)
Binding Specificity:	AA 1-127
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 GM-CSF
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: A1-K127
Specificity:	Expression system for standard: E.coli Immunogen sequence: A1-K127
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

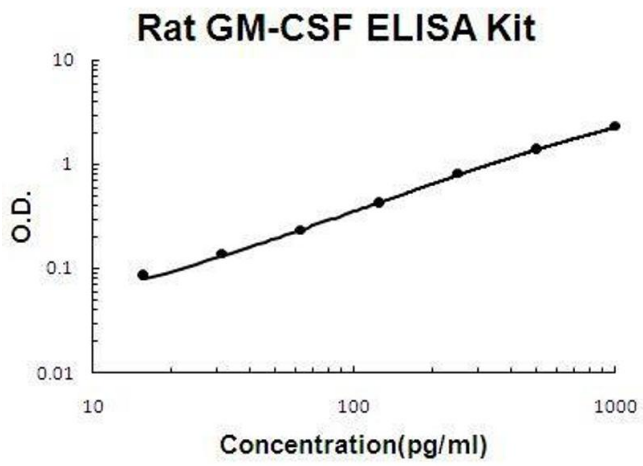
Target:	GM-CSF (CSF2)
Alternative Name:	CSF2 (CSF2 Products)
Background:	Protein Function: Cytokine that stimulates the growth and differentiation of hematopoietic precursor cells from various lineages, including granulocytes, macrophages, eosinophils and erythrocytes. . Background: Granulocyte-macrophage colony-stimulating factor(GM-CSF) is also symbolized CSF2. Human GM-CSF is a glycoprotein that is essential for the in vitro proliferation and differentiation of precursor cells into mature granulocytes and macrophages. The human cDNA clones contain a single open-reading frame encoding a protein of 144 amino acids with a predicted molecular mass of 16,293 daltons and show 69 % nucleotide homology and 54 % amino acid homology to mouse GM-CSF. The gene for human GM-CSF appears to exist as a single-copy gene. Human GM-CSF is a 22,000-dalton glycoprotein that stimulates the growth of myeloid progenitor cells and acts directly on mature neutrophils. The GM-CSF gene is localized by somatic cell hybrid analysis and in situ hybridization to human chromosome region 5q21-5q32, which is involved in interstitial deletions in the 5q- syndrome and acute myelogenous leukemia. A complementary DNA for the T lymphocyte-derived lymphokine, GM-CSF has been cloned, and recombinant GM-CSF protein has been expressed in yeast and purified to homogeneity. This purified human recombinant GM-CSF stimulates peripheral blood monocytes in vitro to become cytotoxic for the malignant melanoma cell line A375. Synonyms: Granulocyte-macrophage colony-stimulating factor,GM-CSF,Colony-stimulating factor,CSF,Csf2,Csfgm, Full Gene Name: Granulocyte-macrophage colony-stimulating factor Cellular Localisation: Secreted.
Gene ID:	116630
UniProt:	P48750
Pathways:	JAK-STAT Signaling, Cellular Response to Molecule of Bacterial Origin

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:	rat GM-CSF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for GM-CSF has been precoated onto 96-well plates. Standards(E.coli, A1-K127) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for GM-CSF 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 GM-CSF 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, 31.3pg/mL, 15.6pg/mL rat GM-CSF 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) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each rat GM-CSF standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 110, Standard deviation: 4.29, CV(%): 3.9 • Sample 2: n=16, Mean(pg/ml): 379, Standard deviation: 16.3, CV(%): 4.3 • Sample 3: n=16, Mean(pg/ml): 646, Standard deviation: 29.07, CV(%): 4.5, • Sample 1: n=24, Mean(pg/ml): 125, Standard deviation: 8.5, CV(%): 6.8 • Sample 2: n=24, Mean(pg/ml): 458, Standard deviation: 31.6, CV(%): 6.9 • Sample 3: n=24, Mean(pg/ml): 637, Standard deviation: 45.2, CV(%): 7.1
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



ELISA

Image 1. Rat GM-CSF PicoKine ELISA Kit standard curve