

Datasheet for ABIN411275

G-CSF ELISA Kit[Go to Product page](#)**1** Image

Overview

Quantity:	96 tests
Target:	G-CSF (CSF3)
Binding Specificity:	AA 31-204
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human G-CSF
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: T31-P204
Specificity:	Expression system for standard: E.coli Immunogen sequence: T31-P204
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity: <4pg/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: G-CSF (CSF3)

Alternative Name: CSF3 ([CSF3 Products](#))

Background: Protein Function: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This CSF induces granulocytes.

Background: Granulocyte colony-stimulating factor(G-CSF) is a member of the CSF family of hormone-like glycoprotein that regulates hematopoietic cell proliferation and differentiation, and it almost exclusively stimulates the colony formation of granulocytes from committed precursor cells in semi-solid agar culture. G-CSF is also termed colony stimulating factor-3, and a single gene of which codes for a 177 or 180 amino acid mature protein of molecular weight 19,600. Functionally, it specifically stimulates the proliferation and differentiation of the progenitor cells for granulocytes. The effect of G-CSF on myeloid leukemias is unique among colony stimulating factors in driving the leukemic cells from a self-renewing malignant state to a mature differentiated phenotype with the concomitant loss of tumorigenicity. Besides, it also prevents cardiac remodeling after myocardial infarction by activating the Jak-Stat pathway in cardiomyocytes. The recombinant form of hG-CSF is capable of supporting neutrophil proliferation in a CFU-GM assay as well as early erythroid colonies and mixed colony formation. Human gene coding for G-CSF is assigned to the q21-q22 region of chromosome 17. The standard product used in this kit is recombinant human G-CSF, consisting of 175 amino acids with the molecular mass of 18.8KDa.

Synonyms: Granulocyte colony-stimulating factor,G-CSF,Pluripoietin,Filgrastim,Lenograstim,CSF3,C17orf33, GCSF,

Full Gene Name: Granulocyte colony-stimulating factor

Cellular Localisation: Secreted.

Gene ID: 1440

Target Details

UniProt: [P09919](#)

Pathways: [Cellular Response to Molecule of Bacterial Origin, Regulation of Actin Filament Polymerization](#)

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.

Comment: Sequence similarities: Belongs to the IL-6 superfamily.

Plate: Pre-coated

Protocol: human G-CSF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for G-CSF has been precoated onto 96-well plates. Standards(E.coli, T31-P204) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for G-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 human G-CSF amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL human G-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 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 G-CSF standard solution and each sample be measured in duplicate.

Assay Precision:

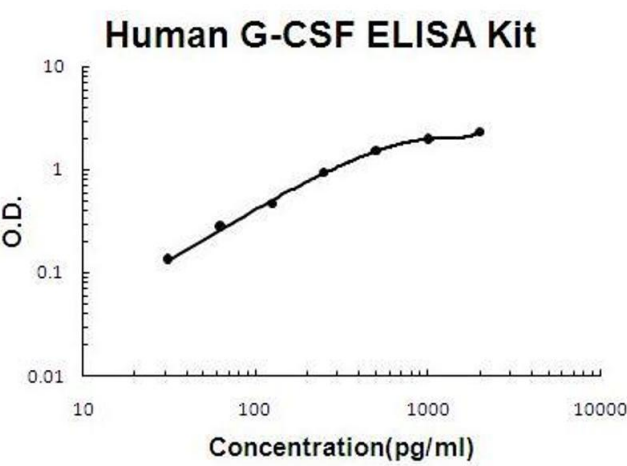
- Sample 1: n=16, Mean(pg/ml): 145, Standard deviation: 5.51, CV(%): 3.8
- Sample 2: n=16, Mean(pg/ml): 727, Standard deviation: 30.53, CV(%): 4.2
- Sample 3: n=16, Mean(pg/ml): 1436, Standard deviation: 58.88, CV(%): 4.1,
- Sample 1: n=24, Mean(pg/ml): 153, Standard deviation: 8.42, CV(%): 5.5
- Sample 2: n=24, Mean(pg/ml): 718, Standard deviation: 46.67, CV(%): 6.5
- Sample 3: n=24, Mean(pg/ml): 1537, Standard deviation: 104.5, CV(%): 6.8

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

Images



ELISA

Image 1. Human G-CSF PicoKine ELISA Kit standard curve