

Product datasheet

Human G-CSF ELISA Kit (CSF3) ab188390

SimpleStep ELISA[®]

3 Images

Overview

Product name Human G-CSF ELISA Kit (CSF3)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall	7			4.8%

Inter-assay

Sample	n	Mean	SD	CV%
Overall	3			5.5%

Sample type Cell culture supernatant

Assay type Sandwich (quantitative)

Sensitivity 5.2 pg/ml

Range 47 pg/ml - 3000 pg/ml

Recovery 110 %

Sample specific recovery

Sample type	Average %	Range
Cell culture media	110	100% - 116%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview

Abcam's G-CSF (CSF3) *in vitro* SimpleStep ELISA[®] (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of G-CSF (CSF3) protein in cell culture supernatants.

The SimpleStep ELISA® employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Notes Granulocyte Colony Stimulating Factor (G-CSF) is a glycoprotein that stimulates bone marrow to produce and release granulocytes and stem cells into the bloodstream. G-CSF also stimulates the survival, proliferation, differentiation, and function of neutrophil precursors and mature neutrophils. G-CSF regulates neutrophil development using Janus kinase (JAK)/signal transducer and activator of transcription (STAT) and Ras/mitogen-activated protein kinase (MAPK) and phosphatidylinositol 3-kinase (PI3K)/protein kinase B (Akt) signal transduction pathway.

Tested applications **Suitable for:** Sandwich ELISA
Platform Microplate

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X G-CSF Capture Antibody	1 x 600µl
10X Human G-CSF Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
ab221824 - Antibody Diluent 4BI	1 x 6ml
G-CSF Human Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Substrate	1 x 12ml

Relevance Granulocyte Colony Stimulating Factor (G-CSF) a cytokine that controls the production, differentiation, and function of granulocytes. It is a potent stimulator of bone marrow cells especially those of neutrophil lineage. In addition, G-CSF can enhance the survival and activate the immunological functions of mature neutrophils. Recombinant human G-CSF has been developed by pharmaceutical companies, and since the late 1980's, multiple clinical trials have

explored its efficacy in a variety of conditions.

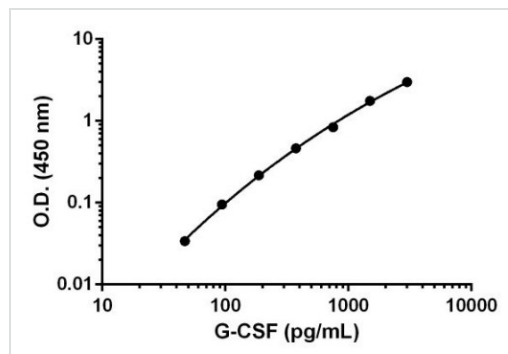
Applications

Our [Abpromise guarantee](#) covers the use of **ab188390** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

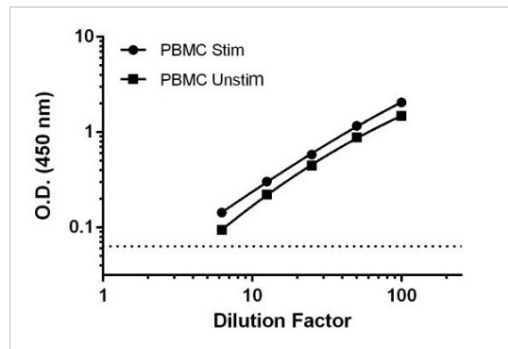
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

Images



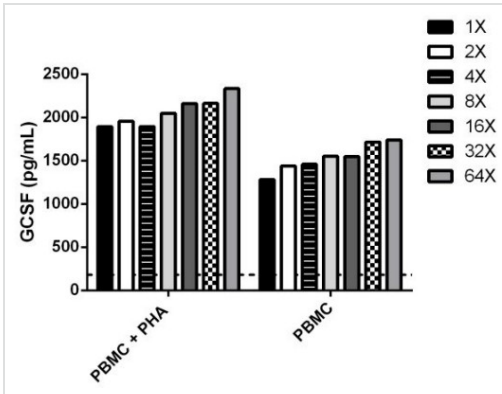
Example of G-CSF standard curve.

Background-subtracted data values (mean +/- SD) are graphed.



Titration of PBMC stimulated (+PHA) and unstimulated cell culture supernatants within the working range of the assay.

Background-subtracted data values (mean +/- SD, n = 2) are graphed.



Bar graph denotes interpolated values of G-CSF protein across dilution series. Dotted line denotes average value for media controls across dilution series.

Titration of PBMC stimulated (+PHA) and unstimulated cell culture supernatants within the working range of the assay.

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