

Product Specification Sheet

G-CSF (G-CSF/GCSF/CSF-3) Antibodies

Cat. GCSF12-A	Rabbit Anti-Human GCS IgG (aff pure)	SIZE: 100 ug
Cat. GCSF12-C	Recombinant purified human GCSF protein control for WB	SIZE: 100 ul

GRANULOCYTE COLONY-STIMULATING FACTOR (GCSF) or COLONY-STIMULATING FACTOR 3 (CSF3), is a glycoprotein that is produced and secreted by macrophages stimulated with endotoxin. It is also produced by a number of different tissues to stimulate the bone marrow to produce granulocytes and stem cells. G-CSF then stimulates the bone marrow to pulse them out of the marrow into the blood. It also stimulates the survival, proliferation, differentiation, and function of neutrophil precursors and mature neutrophils. The natural human GCSF exists in two forms, a 174- and 180-amino-acid-long protein (precursor 204 aa, mature peptide 175-aa; chromosome 17q11.2-q12, ~19.6 kda). The more-abundant and more-active 174-amino acid form has been used in the development of pharmaceutical products (Available under the names Neupogen or Granulokine (Amgen/Roche) and Granocyte (Rhone-Poulenc). GCSF is used to treat neutropenia (a disorder characterized by an extremely low number of neutrophils in blood). The PEG (polyethylene glycol) form has a much longer half-life, reducing the necessity of daily injections. G-CSF stimulates the production of white blood cells. Recombinant G-CSF is used in certain cancer patients to accelerate recovery from neutropenia after chemotherapy, allowing higher-intensity treatment regimens. G-CSF is also used to increase the number of hematopoietic stem cells in the blood before collection by leukapheresis for use in hematopoietic stem cell transplantation.

GCSF mRNA is alternatively spliced to produce 2 isoforms. Isoform 1 (mature peptide 175 aa or long form) and isoform 2 (short form, missing 66-68 aa). Both forms have authentic GCSF activity.

Source of Antigen and Antibodies

Antigen	Recombinant purified human GCSF protein (#GCSF16-R-10)
Ab Host/type	Rabbit, Polyclonal IgG, purified over antigen-agarose (Cat # GCSF12-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Mouse GSCF protein was expressed in E. Coli and purified (>95%). For Western blot +ve control (**Cat # GCSF12-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **GCSF12-C** for good visibility with antibody Cat # **GCSF12-A**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of

fresh 2x sample buffer per 10 ul of the **GCSF12-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA and 0.05% azide
Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20oC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-3 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control protein/well).

Histochemistry & Immunofluorescence: not tested. We recommend the use of paraformaldehyde-acetone fixation method at 2-10 ug/ml.

Specificity & Cross-reactivity

Anti-human GCSF12-A has poor crossreactivity with mouse GCSF. ADI has anti-mouse GCSF antibodies (Cat #GCSF11-A). No significant crossreactivity is observed with IL-6, CNTF or OSM or other cytokines. Antibody crossreactivity in various species is not established. Control protein (Cat # GCSF16-R, biologically active is also available.

General References: Nagata S (1986) Nature 319, 415-418; Develin JJ (1987) J. Leukocyte Biol. 41, 302-306; Souza LM (1986) Science 232, 61-66;

*This product is for in vitro research use only.

Related material available from ADI

Mouse and Human GSCF ELISA Kits
Anti-Mouse and Human GCSF and GCSFR
Recombinant mouse and human GCSF and GCSFR

GCSF12

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