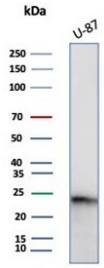
GCSF Antibody / CSF3 Cytokine Signaling Marker [clone CSF3/4594] (V4471)

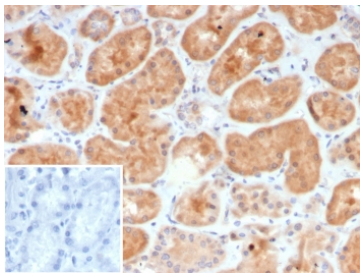
Catalog No.	Formulation	Size
V4471-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4471-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4471SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

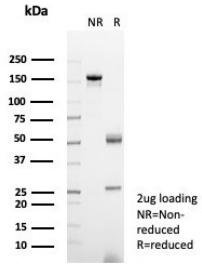
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	CSF3/4594
Purity	Protein A/G affinity
UniProt	P09919
Localization	Cytoplasm
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This GCSF Antibody / CSF3 Cytokine Signaling Marker is available for research use only.



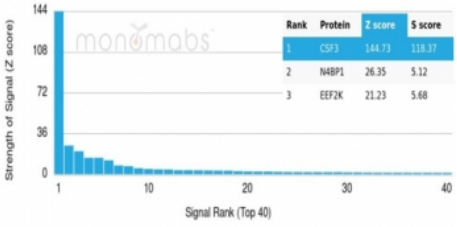
GCSF Antibody U-87 WB. Western blot analysis of Granulocyte colony stimulating factor / CSF3 in human U-87 cell lysate using mouse monoclonal GCSF antibody, clone CSF3/4594. A band is detected at approximately 22 kDa, consistent with the predicted molecular weight of G-CSF, supporting detection of this cytokine in glioblastoma-derived cells.



GCSF Antibody Renal Tissue IHC. Immunohistochemistry of Granulocyte colony stimulating factor / CSF3 in FFPE human kidney tissue using mouse monoclonal GCSF antibody, clone CSF3/4594. HRP-DAB brown staining highlights cytoplasmic labeling of renal tubular epithelial cells, consistent with cytokine-associated expression in metabolically active tissue, while surrounding interstitial cells show lower staining and nuclei are counterstained blue. Inset: PBS was used in place of primary antibody as a negative control to confirm specificity of staining. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free GCSF antibody (clone CSF3/4594) as confirmation of integrity and purity.



GCSF Antibody Microarray Specificity Validation. Protein microarray analysis of Granulocyte colony stimulating factor / CSF3 using mouse monoclonal GCSF antibody, clone CSF3/4594, across a HuProt(TM) array containing more than 19,000 full-length human proteins demonstrates highly selective binding to CSF3 with minimal off-target interaction. The signal profile shows strong enrichment for CSF3 relative to other proteins on the array, supporting high specificity in a proteome-wide context. Z-score represents the strength of antibody binding signal expressed as standard deviations above the mean array signal, while S-score reflects the separation between the top-ranked target and the next highest signal, confirming selective recognition of GCSF.

Description

Granulocyte colony stimulating factor (GCSF), encoded by the CSF3 gene, is a secreted cytokine belonging to the colony-stimulating factor family that plays a central role in the regulation of neutrophil development and innate immune responses. GCSF Antibody / CSF3 Cytokine Signaling Marker (clone CSF3/4594) is designed as a reference reagent for detecting this key hematopoietic cytokine across a range of experimental systems. GCSF antibody, also referred to as CSF3 antibody or granulocyte colony stimulating factor antibody in the literature, is widely used in studies of immune activation, inflammation, and myeloid lineage biology.

CSF3 is primarily produced by macrophages, endothelial cells, fibroblasts, and activated T cells in response to inflammatory stimuli such as infection or tissue injury. It functions as a critical regulator of granulopoiesis by promoting the proliferation, differentiation, and survival of neutrophil precursors within the bone marrow. In addition to its effects on progenitor cells, GCSF enhances the functional activity of mature neutrophils, including chemotaxis, phagocytosis, and microbial killing. This dual role in development and activation makes CSF3 essential for effective host defense.

Upon binding to its receptor (CSF3R), GCSF activates intracellular signaling pathways including JAK-STAT, MAPK, and PI3K-AKT, leading to transcriptional programs that support cell survival, proliferation, and inflammatory response. Tight regulation of these pathways is required for immune homeostasis, and dysregulation of CSF3 signaling has been associated with chronic inflammatory diseases, autoimmune disorders, and tumor-associated immune modulation.

GCSF also plays a role in mobilizing hematopoietic stem and progenitor cells into the circulation, a property that has been widely utilized in clinical and experimental settings. Its involvement in both normal physiology and disease highlights its importance as a target for studying immune system dynamics and hematopoietic regulation.

As a secreted cytokine, CSF3 is typically detected in extracellular compartments, conditioned media, or within producing cells depending on the assay and sample preparation. In immunohistochemistry, staining is often observed in subsets of immune and stromal cells within inflamed or tumor-associated tissues, with cytoplasmic localization corresponding to sites of cytokine synthesis. Western blot analysis generally detects CSF3 at approximately 18Ã¢Â€Â“20 kDa, consistent with its predicted molecular weight, although detection can vary depending on secretion and processing.

The mouse monoclonal clone CSF3/4594 antibody provides reliable detection of CSF3 in research applications. Its use as an anchor reagent supports consistent evaluation of GCSF expression in studies of neutrophil biology, inflammatory signaling, and hematopoietic function.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the GCSF Antibody / CSF3 Cytokine Signaling Marker should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-200) from the human protein was used as the immunogen for the GCSF antibody.

Storage

Aliquot the GCSF antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

GCSF antibody, CSF3 antibody, Granulocyte colony stimulating factor antibody, G-CSF protein antibody, Colony stimulating factor 3 antibody

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