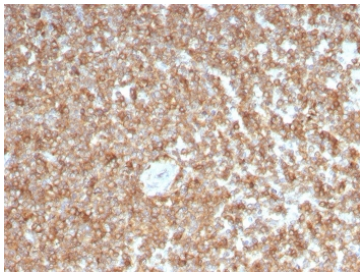
GM-CSF Antibody / CSF2 Microarray Specificity Validated Antibody [clone CSF2/3403] (V8121)

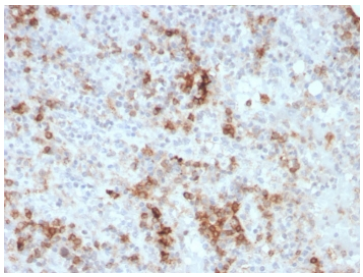
Catalog No.	Formulation	Size
V8121-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8121-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8121SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

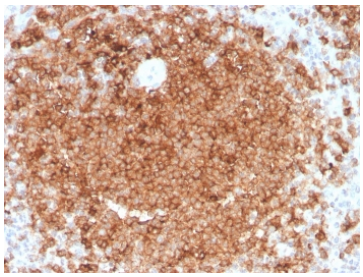
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rat
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	CSF2/3403
Purity	Protein G affinity chromatography
UniProt	P04141
Localization	Secreted (extracellular)
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This GM-CSF Antibody / CSF2 Microarray Specificity Validated Antibody is available for research use only.



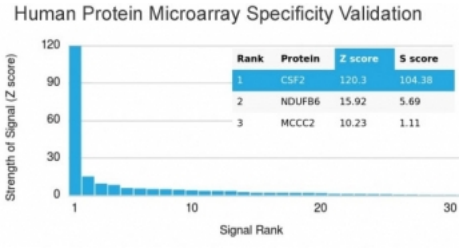
GM-CSF Antibody Lymphoid Tissue IHC. Immunohistochemistry of Granulocyte macrophage colony stimulating factor / CSF2 in FFPE human spleen tissue using mouse monoclonal GM-CSF antibody, clone CSF2/3403. HRP-DAB brown staining highlights cytoplasmic labeling in immune cell populations within splenic white pulp regions, consistent with cytokine expression in lymphoid tissue, while surrounding areas show lower background staining and nuclei are counterstained blue. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min followed by cooling prior to staining.



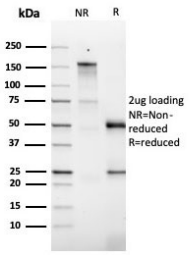
GM-CSF Antibody Immune Cell Distribution IHC. Immunohistochemistry of Granulocyte macrophage colony stimulating factor / CSF2 in FFPE human spleen tissue using mouse monoclonal GM-CSF antibody, clone CSF2/3403. HRP-DAB brown staining highlights scattered cytoplasmic labeling in subsets of immune cells within splenic tissue, with a focal and heterogeneous distribution consistent with cytokine-producing cell populations, while surrounding lymphoid cells show lower staining and nuclei are counterstained blue. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min followed by cooling prior to staining.



GM-CSF Antibody Lymphoid Follicle IHC. Immunohistochemistry of Granulocyte macrophage colony stimulating factor / CSF2 in FFPE human spleen tissue using mouse monoclonal GM-CSF antibody, clone CSF2/3403. HRP-DAB brown staining highlights dense cytoplasmic labeling within lymphoid follicle regions, with strong signal in clustered immune cells consistent with localized cytokine expression, while surrounding splenic tissue shows lower background staining and nuclei are counterstained blue. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min followed by cooling prior to staining.



GM-CSF Antibody Microarray Specificity Validation. Protein microarray analysis of Granulocyte macrophage colony stimulating factor / CSF2 using mouse monoclonal GM-CSF antibody, clone CSF2/3403, across a HuProt(TM) array containing more than 19,000 full-length human proteins demonstrates highly selective binding to CSF2 with minimal off-target interaction. The signal profile shows strong enrichment for CSF2 relative to other proteins on the array, supporting high specificity. 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 GM-CSF in a proteome-wide context.



SDS-PAGE analysis of purified, BSA-free GMCSF antibody (clone CSF2/3403) as confirmation of integrity and purity.

Description

Granulocyte-macrophage colony-stimulating factor (GM-CSF), encoded by the CSF2 gene, is a secreted cytokine that plays a central role in immune regulation, hematopoiesis, and inflammatory signaling. GM-CSF Antibody / CSF2 Microarray Specificity Validated Antibody (clone CSF2/3403) is designed as a high-confidence reference reagent for detection of GM-CSF, combining biochemical validation with proteome-wide specificity assessment. GM-CSF antibody, also referred to as CSF2 antibody or granulocyte macrophage colony-stimulating factor antibody in the literature, is widely used in studies of immune activation, cytokine signaling, and inflammatory disease. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

GM-CSF is produced by a variety of cell types, including T lymphocytes, macrophages, endothelial cells, and fibroblasts, particularly in response to immune stimulation. It functions as a key regulator of myeloid cell development, promoting the proliferation and differentiation of granulocytes and macrophages from hematopoietic progenitors. In addition to its role in hematopoiesis, GM-CSF enhances the functional activity of mature immune cells, including antigen presentation, phagocytosis, and cytokine production.

Functionally, GM-CSF acts through its receptor to activate downstream signaling pathways such as JAK-STAT, MAPK, and PI3K pathways, leading to transcriptional programs that support immune cell survival and activation. These signaling cascades are critical in both normal immune responses and pathological conditions, including chronic inflammation, autoimmune disease, and cancer-associated immune modulation.

As a secreted protein, GM-CSF is typically detected in extracellular compartments, conditioned media, or within producing cells depending on the assay and experimental context. In immunohistochemistry, staining may be observed in immune cell populations and stromal cells within inflamed or tumor-associated tissues, often with cytoplasmic localization corresponding to cytokine production.

A defining feature of this antibody is its validation using protein microarray analysis across thousands of human proteins, demonstrating selective binding to GM-CSF with minimal off-target interaction. This provides strong evidence of specificity and supports its use as a reference antibody for accurate detection of CSF2 in complex biological samples.

The mouse monoclonal clone CSF2/3403 antibody provides reliable and specific detection of GM-CSF in research applications. Its combination of microarray-confirmed specificity and robust performance in multiple assay formats makes it well suited as an anchor antibody for studies of immune signaling, cytokine biology, and inflammatory regulation.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the GM-CSF Antibody / CSF2 Microarray Specificity Validated Antibody to be titered up or down for optimal performance.

Immunogen

Recombinant human protein was used as the immunogen for this GMCSF antibody.

Storage

Store the GMCSF antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

GM-CSF antibody, CSF2 antibody, Granulocyte macrophage colony stimulating factor antibody, GMCSF protein antibody, Colony stimulating factor 2 antibody

References (3)