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CSF1R Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7604d

Specification

CSF1R Antibody - Product Information

Application	**WB, FC, IF,E**
Primary Accession	P07333
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

CSF1R Antibody - Additional Information

Gene ID 1436

Other Names
Macrophage colony-stimulating factor 1 receptor, CSF-1 receptor, CSF-1-R, CSF-1R, M-CSF-R, Proto-oncogene c-Fms, CD115, CSF1R, FMS

Target/Specificity
This CSF1R antibody is generated from rabbits immunized with CSF1R recombinant protein.

Dilution
WB~~1:2000
FC~~1:10~50
IF~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
CSF1R Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CSF1R Antibody - Protein Information

Name CSF1R

Synonyms FMS

Function Tyrosine-protein kinase that acts as a cell-surface receptor for CSF1 and IL34 and plays

an essential role in the regulation of survival, proliferation and differentiation of hematopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of pro-inflammatory chemokines in response to IL34 and CSF1, and thereby plays an important role in innate immunity and in inflammatory processes. Plays an important role in the regulation of osteoclast proliferation and differentiation, the regulation of bone resorption, and is required for normal bone and tooth development. Required for normal male and female fertility, and for normal development of milk ducts and acinar structures in the mammary gland during pregnancy. Promotes reorganization of the actin cytoskeleton, regulates formation of membrane ruffles, cell adhesion and cell migration, and promotes cancer cell invasion. Activates several signaling pathways in response to ligand binding, including the ERK1/2 and the JNK pathway (PubMed:20504948, PubMed:30982609). Phosphorylates PIK3R1, PLCG2, GRB2, SLA2 and CBL. Activation of PLCG2 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, that then lead to the activation of protein kinase C family members, especially PRKCD. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to activation of the AKT1 signaling pathway. Activated CSF1R also mediates activation of the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1, and of the SRC family kinases SRC, FYN and YES1. Activated CSF1R transmits signals both via proteins that directly interact with phosphorylated tyrosine residues in its intracellular domain, or via adapter proteins, such as GRB2. Promotes activation of STAT family members STAT3, STAT5A and/or STAT5B. Promotes tyrosine phosphorylation of SHC1 and INPP5D/SHIP-1. Receptor signaling is down-regulated by protein phosphatases, such as INPP5D/SHIP-1, that dephosphorylate the receptor and its downstream effectors, and by rapid internalization of the activated receptor. In the central nervous system, may play a role in the development of microglia macrophages (PubMed:30982608).

Cellular Location
Cell membrane; Single-pass type I membrane protein

Tissue Location
Expressed in bone marrow and in differentiated blood mononuclear cells

CSF1R Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CSF1R Antibody - Images

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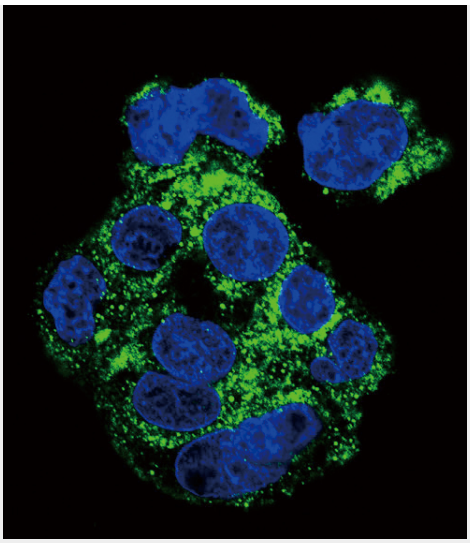
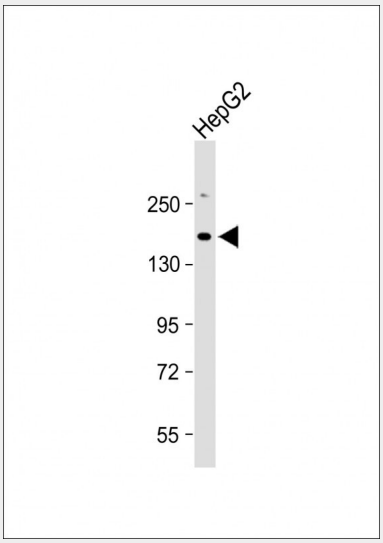


Confocal immunofluorescent analysis of CSF1R Antibody(Cat#AP7604d) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).DAPI was used to stain the cell nuclear (blue).



Anti-CSF1R Antibody at 1:2000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 108 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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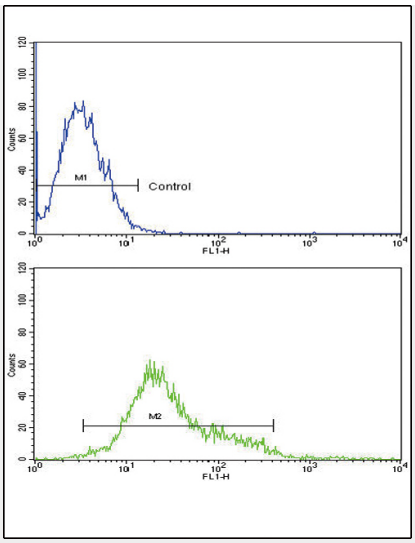

CSF1R Antibody (Cat. #AP7604d) flow cytometric analysis of k562 cells (bottom histogram) compared to a negative control (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

CSF1R Antibody - Background

CSF1R is the receptor for colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of macrophages. This receptor mediates most if not all of the biological effects of this cytokine. Ligand binding activates the receptor kinase through a process of oligomerization and transphosphorylation. The encoded protein is a tyrosine kinase transmembrane receptor and member of the CSF1/PDGF receptor family of tyrosine-protein kinases.

CSF1R Antibody - References

Guey,L.T., et.al., Eur. Urol. 57 (2), 283-292 (2010)
Wooten,E.C., et.al., PLoS ONE 5 (1), E8830 (2010)
Hosgood,H.D. III, et.al., Respir Med 103 (12), 1866-1870 (2009)