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MCSF Receptor (CSF1R) Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP7604b

Specification

MCSF Receptor (CSF1R) Antibody (C-term) Blocking peptide - Product Information

Primary Accession P07333

MCSF Receptor (CSF1R) Antibody (C-term) Blocking peptide - 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
The synthetic peptide sequence used to generate the antibody <a >AP7604b was selected from the C-term region of human CSF1R . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MCSF Receptor (CSF1R) Antibody (C-term) Blocking peptide - Protein Information

Name CSF1R

MCSF Receptor (CSF1R) Antibody (C-term) Blocking peptide - 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. Mutations in this gene have been associated with a predisposition to myeloid malignancy.

MCSF Receptor (CSF1R) Antibody (C-term) Blocking peptide - References

Follows, G.A., et al., EMBO J. 22(11):2798-2809 (2003).Riccioni, R., et al., Leukemia 17(1):98-113 (2003).Zhu, K., et al., Biochem. Biophys. Res. Commun. 297(5):1211-1217 (2002).Ide, H., et al., Proc. Natl. Acad. Sci. U.S.A. 99(22):14404-14409 (2002).Flick, M.B., et al., J. Cell. Biochem. 85(1):10-23 (2002).

Synonyms FMS

Function
Tyrosine-protein kinase that acts as 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 proinflammatory 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

MCSF Receptor (CSF1R) Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides