

Anti-CSF1R/M-CSFR Antibody

Catalog # ABO11209

Product Information

Application	WB
Primary Accession	P07333
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Macrophage colony-stimulating factor 1 receptor(CSF1R) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	1436
Other Names	Macrophage colony-stimulating factor 1 receptor, CSF-1 receptor, CSF-1-R, CSF-1R, M-CSF-R, 2.7.10.1, Proto-oncogene c-Fms, CD115, CSF1R, FMS
Calculated MW	107984
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse
Subcellular Localization	Cell membrane; Single-pass type I membrane protein.
Tissue Specificity	Expressed in bone marrow and in differentiated blood mononuclear cells.
Source	Eukaryota
Protein Name	Macrophage colony-stimulating factor 1 receptor
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human MCSF Receptor(955-972aa EQGDIAQPLLQPNNYQFC), different from the related mouse sequence by one amino acid and from the related rat sequence by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also

Sequence Similarities

be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.

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

Background

CSF1R (Colony-Stimulating Factor 1 Receptor) also known as MCSFR, FMS, c-FMS, CD115, ONCOGENE FMS or CD115 ANTIGEN, encodes a tyrosine kinase growth factor receptor for colony-stimulating factor-1, the macrophage- and monocyte-specific growth factor. The gene is located on long arm of chromosome 5(5q32) on the Crick(minus) strand. The as-yet-unidentified □CSF1 R promoter/enhancer sequences may be confined to the nucleotides separating the 2 genes or could potentially lie within the PDGFR gene itself. The encoded protein is a single pass type I membrane protein and acts as the receptor for □colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of □macrophages. The encoded

protein is a tyrosine kinase transmembrane receptor and member of the CSF1/PDGF receptor family of tyrosine-protein kinases. Kondo et al.(2000) showed that the endogenous myelomonocytic cytokine receptors for GM-CSF and macrophage colony-stimulating factor(CSF1R) are expressed at low to moderate levels on the more primitive hematopoietic stem cells, are absent on common lymphoid progenitors, and are upregulated after myeloid lineage induction by IL2.

Images



Anti-MCSF Receptor antibody, ABO11209, Western blottingWB: Rat Intestine Tissue Lysate

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.