



Rabbit Anti-CD115/MCSF Receptor antibody

SL2755R

Product Name:	CD115/MCSF Receptor
Chinese Name:	巨噬细胞集落刺激因子受体抗体
Alias:	C FMS; CD 115; CD115; CD115 antigen; CFMS; Colony stimulating factor 1 receptor; Colony stimulating factor I receptor; CSF 1 R; CSF 1R; CSF-1 receptor; CSF-1-R; CSF1 R; CSF1R; CSF1R_HUMAN; CSFR; FIM 2; FIM2; FMS; FMS proto oncogene; FMS protooncogene; HDLS; M-CSF Receptor; M-CSF-R; Macrophage colony stimulating factor 1 receptor; Macrophage colony stimulating factor I receptor; Macrophage colony-stimulating factor 1 receptor; McDonough feline sarcoma viral (v fms) oncogene homolog; Oncogen FMS; Proto-oncogene c-Fms; V-FMS McDonough feline sarcoma viral oncogen homolog, formerly.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1ug/testIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	107kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human MCSF receptor:201-300/972<Extracellular>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:

[PubMed](#)

This protein tyrosine kinase transmembrane receptor 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 member of the CSF1/PDGF receptor family of tyrosine protein kinases and contains 5 immunoglobulin like C2 type domains. CD115 is expressed by cells of the monocytic lineage and by progenitor cells. Mutations in this gene have been associated with a predisposition to myeloid malignancy.

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. 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.

Subunit:

Interacts with INPPL1/SHIP2 and THOC5 (By similarity). Monomer. Homodimer. Interacts with CSF1 and IL34. Interaction with dimeric CSF1 or IL34 leads to receptor homodimerization. Interacts (tyrosine phosphorylated) with PLCG2 (via SH2 domain). Interacts (tyrosine phosphorylated) with PIK3R1 (via SH2 domain). Interacts (tyrosine phosphorylated) with FYN, YES1 and SRC (via SH2 domain). Interacts (tyrosine phosphorylated) with CBL, GRB2 and SLA2.

Product Detail:

Subcellular Location:

Cell membrane; Single-pass type I membrane protein.

Tissue Specificity:

Expressed in bone marrow and in differentiated blood mononuclear cells.

Post-translational modifications:

Autophosphorylated in response to CSF1 or IL34 binding. Phosphorylation at Tyr-561 is important for normal down-regulation of signaling by ubiquitination, internalization and degradation. Phosphorylation at Tyr-561 and Tyr-809 is important for interaction with SRC family members, including FYN, YES1 and SRC, and for subsequent activation of these protein kinases. Phosphorylation at Tyr-699 and Tyr-923 is important for interaction with GRB2. Phosphorylation at Tyr-723 is important for interaction with PIK3R1. Phosphorylation at Tyr-708 is important for normal receptor degradation. Phosphorylation at Tyr-723 and Tyr-809 is important for interaction with PLCG2. Phosphorylation at Tyr-969 is important for interaction with CBL. Ubiquitinated. Becomes rapidly polyubiquitinated after autophosphorylation, leading to its degradation.

DISEASE:

Note=Aberrant expression of CSF1 or CSF1R can promote cancer cell proliferation, invasion and formation of metastases. Overexpression of CSF1 or CSF1R is observed in a significant percentage of breast, ovarian, prostate, and endometrial cancers.

Note=Aberrant expression of CSF1 or CSF1R may play a role in inflammatory diseases, such as rheumatoid arthritis, glomerulonephritis, atherosclerosis, and allograft rejection.

Similarity:

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

Contains 5 Ig-like C2-type (immunoglobulin-like) domains.

Contains 1 protein kinase domain.

SWISS:

P07333

Gene ID:

1436

Database links:

[Entrez Gene: 1436](#)Human

[Entrez Gene: 12978](#)Mouse

[Omin: 164770](#)Human

[SwissProt: P07333](#)Human

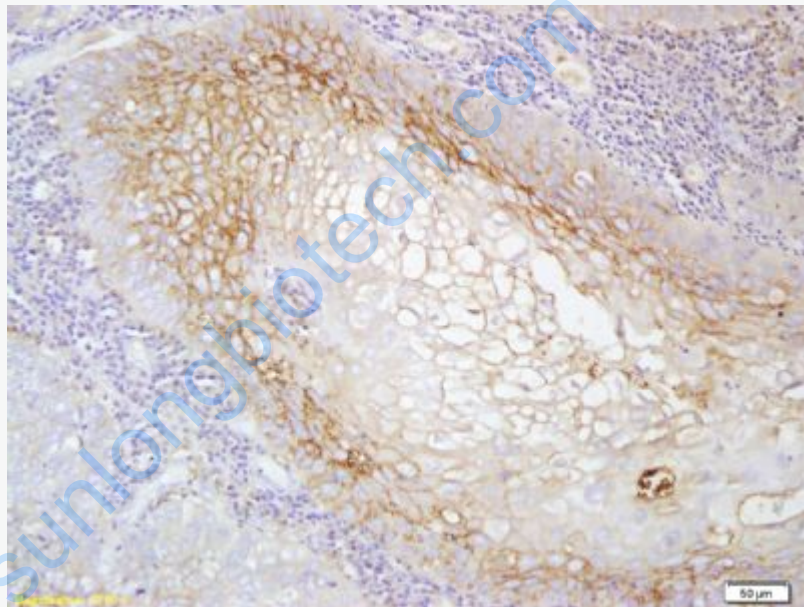
[SwissProt: P09581](#)Mouse

[Unigene: 586219](#)Human

[Unigene: 22574](#)Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

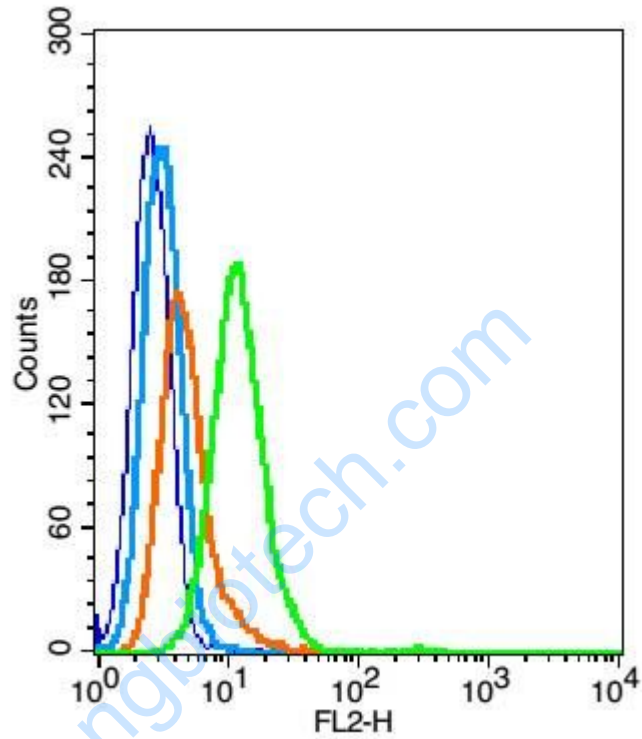
Tissue/cell: human laryngocarcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-MCSF Receptor/CD115 Polyclonal Antibody,

Unconjugated(SL2755R) 1:200, overnight at 4°C, followed by conjugation to the

secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: Hela(blue).

Primary Antibody:Rabbit Anti-CD115 antibody(SL2755R), Dilution: 5 μ g in 100 μ L
1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions);

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X
PBS containing 0.5% BSA.