Recombinant Human CSF1R Protein (20-512), His tagged

Cat. No. CSF1R-1826H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CSF1R (20-512) fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	20-512
Description	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. 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

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	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.
Form	Lyophilized powder/frozen liquid
Molecular Mass	54.57 kDa
Purity	>90% as determined by SDS-PAGE
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS, pH 7.5 or lyophilized from PBS, pH 7.5.
Reconstitution	Reconstitute in sterile water for a stock solution.
Shipping	They are shipped out with dry ice/blue ice unless customers require otherwise.

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GENE INFORMATION

Gene Name	CSF1R colony stimulating factor 1 receptor [Homo sapiens (human)]
Official Symbol	CSF1R
Synonyms	CSF1R; colony stimulating factor 1 receptor; FMS, McDonough feline sarcoma viral (v fms) oncogene homolog; macrophage colony-stimulating factor 1 receptor; C FMS; CD115; CSFR; CSF-1-R; CD115 antigen; CSF-1 receptor; FMS proto-oncogene; proto-oncogene c-Fms; macrophage colony stimulating factor I receptor; McDonough feline sarcoma viral (v-fms) oncogene homolog; FMS; FIM2; HDLS; C-FMS; CSF-1R; M-CSF-R;
Gene ID	1436
mRNA Refseq	NM_005211
Protein Refseq	NP_005202
MIM	164770
UniProt ID	P07333

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