Recombinant Human CSF1R Protein (Y538-C972), GST tagged

Cat. No. CSF1R-1320S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GST-TEV-GG-FMS(Y538-C972 end) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	Y538-C972
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

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	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.
Form	Liquid
Endotoxin	< 0.01 EU per μg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

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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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