

# Recombinant Cat CSF1R Protein (20-514 aa), His-SUMO-tagged

**Cat. No.** CSF1R-429C    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant Cat CSF1R Protein (20-514 aa) is produced by E. coli expression system. This protein is fused with a 6xHis-SUMO tag at the N-terminal. Protein Description: Full Length.
<b>Species</b>	Cat
<b>Source</b>	E.coli
<b>ProteinLength</b>	20-514 aa
<b>Description</b>	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 hatopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of proinflammatory chokines 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 fale 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 mbrane 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

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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.

**Form** Tris-based buffer, 50% glycerol

**Molecular Mass** 70.8 kDa

**AA Sequence**

VPVIQPSGPELVVEPGTTVTLRCVGNNGSVEWDGPISPHWNLDLDPSSILTTNNATF  
 QNTGTYHCTEPGNPQGGNATIHLYVKDPAWPVKVLAQEVTVLEGQDALLPCLLTDP  
 ALEAGVSLVRVRGRPVLRQTNYSFSPWHGFTIHKAKFIENHVYQCSARVDGRTVTS  
 MGIWLKVQKDISGPATLTLEPAELVRIQGEAAQIVCSASNIDVNFVSLRHGDTKLTIS  
 QQSDFHDNRYQKVLTLNLDHVSFQDAGNYSCTATNAWGNHSASMVFRVVESAYLN  
 LTSEQSLLQEVTVGEKVDLQVKVEAYPGLESFNWTYLGPFSQDYQDKLDFVTIKDTYR  
 YTSTLSLRLKRSEAGRYSFLARNAGGQNALTFELTLRYPPEVRVTMTLINGSDTLLC  
 EASGYPQPSVTWVQCRSHTDRCDESAGLVLEDSEVLSQVPFHEVIVHSLLAIGTL  
 EHNRTYECRAFNSVGNSSQTFWPISIGAHTQLPDELLFTP

**Purity** > 90% as determined by SDS-PAGE.

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<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4 centigrade for up to one week.
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20 centigrade/-80 centigrade. The shelf life of lyophilized form is 12 months at -20 centigrade/-80 centigrade.
<b>Concentration</b>	A hardcopy of COA with concentration instruction is sent along with the products.

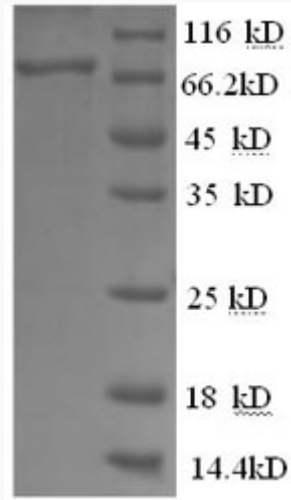
## GENE INFORMATION

<b>Gene Name</b>	CSF1R colony stimulating factor 1 receptor [ <i>Felis catus</i> ]
<b>Official Symbol</b>	CSF1R
<b>Synonyms</b>	CSF1R; c-fms; CSF-1-R; CSF-1 receptor; CSF1; M-CSF; CSF-1R; M-CSF-R;
<b>Gene ID</b>	493706
<b>mRNA Refseq</b>	NM_001009231
<b>Protein Refseq</b>	NP_001009231
<b>UniProt ID</b>	P13369

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(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

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