

Recombinant Human M-CSF R/CD115 Protein (His Tag)

RPE8361



Product Information

Product SKU: RPE8361	Expression Host: Mammalian	Size: 20µg
Tag: C-His	Reactivity: Human	Accession: P07333

Additional Information

Calculated MW: 54.1 kDa	Observed MW: 80 kDa
Sequence: Ile20-Glu512	

Protein Information

Background: M-CSFR encoded by the proto-oncogene *c-fms* is the receptor for colony stimulating factor 1 (CSF1R), a cytokine involved in the proliferation, differentiation, and activation of macrophages. This cell surface glycoprotein is consisted by an extracellular ligand-binding domain, a single membrane-spanning segment, and an intracellular tyrosine kinase domain. Binding of CSF1 activates the receptor kinase, leading to "autophosphorylation" of receptor subunits and the concomitant phosphorylation of a series of cellular proteins on tyrosine residues. CSF1R is a tyrosine kinase receptor that is absolutely required for macrophage differentiation and thus occupies a central role in hematopoiesis. CSF1 and its receptor (CSF1R, product of *c-fms* proto-oncogene) were initially implicated as essential for normal monocyte development as well as for trophoblastic implantation. This apparent role for CSF1/CSF1R in normal mammary gland development is very intriguing because this receptor/ligand pair has also been found to be important in the biology of breast cancer in which abnormal expression of CSF1 and its receptor correlates with tumor cell invasiveness and adverse clinical prognosis. Tumor cell expression of CSF1R is under the control of several steroid hormones (glucocorticoids and progestins) and the binding of several bHLH transcription factors, while tumor cell expression of CSF-1 appears to be regulated by other hormones, some of which are involved in normal lactogenic differentiation. However, studies have demonstrated that CSF1 and CSF1R

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have additional roles in mammary gland development during pregnancy and lactation. The role of CSF1 and CSF1R in normal and neoplastic mammary development that may elucidate potential relationships of growth factor-induced biological changes in the breast during pregnancy and tumor progression.

Synonyms:	FIM, CSF1R, C-FMS, CD115, CSF-1R, CSFR, FIM2, FMS, HDLS, M-CSF-R, BANDDOS, CSF-1 receptor, CSF-1-R, Macrophage colony-stimulating factor 1 receptor, MCSF Receptor, Proto-oncogene c-Fms, M-CSFR, c-fms, CSF-1R, FMS, C FMS, CD 115, CD115 antigen, CFMS, Colony stimulating factor 1 receptor, Colony stimulating factor I receptor, CSF 1 R, CSF 1R, CSF1 R, EC 2.7.10.1, FIM 2, FMS proto oncogene, FMS protooncogene, formerly, Macrophage colony stimulating factor 1 receptor, Macrophage colony stimulating factor I receptor, McDonough feline sarcoma viral (v fms) oncogene homolog, M-CSF Receptor, MCSF Receptor, MCSFR, Oncogen FMS, V-FMS McDonough feline sarcoma viral oncogen homolog
Endotoxin:	< 1.0 EU/mg of the protein as determined by the LAL method
Formulation:	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Purity:	> 90% as determined by reducing SDS-PAGE.
Bio-Activity:	Not validated for activity
Storage:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.