

Recombinant Human CSF1R/CD115 Protein (His & GST Tag)

Catalog No. PKSH030422

Note: Centrifuge before opening to ensure complete recovery of vial contents.

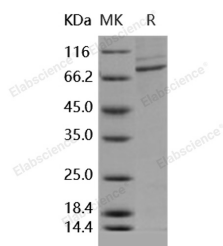
Description

Synonyms	Macrophage colony-stimulating factor 1 receptor;CSF-1 receptor;CSF-1-R;CSF-1R;M-CSF-R;Proto-oncogene c-Fms;CD115;CSF1R;FMS;C-FMS;FIM2;FMS;HDLS;M-CSF-R;MCSF Receptor
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Lys 543-Cys 972
Accession	NP_005202.2
Calculated Molecular Weight	76 kDa
Observed molecular weight	75 kDa
Tag	N-His-GST
Bioactivity	Not validated for activity

Properties

Purity	> 82 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.
Formulation	Supplied as sterile solution of 50mM Tris, 150mM NaCl, pH 7.4, 20% glycerol, 0.3mM DTT
Reconstitution	Not Applicable

Data



> 82 % as determined by reducing SDS-PAGE.

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.

For Research Use Only

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.