

## CSF1R active protein

CSF1R Protein, Human, Recombinant (ECD, hFc Tag)

CATALOG #  
**AAA257832**

HOST  
**HEK293 Cells**

### PRODUCT SYNONYMS

CSF1R; CSF1R Protein; Human; Recombinant (ECD; hFc Tag); Human CSF1R/MCSF Receptor/CD115 Protein (Fc Tag); C-FMS Protein; CD115 Protein; CSF-1R Protein; CSFR Protein; FIM2 Protein; FMS Protein; HDLS Protein; M-CSF-R Protein; MCSF Receptor Protein; colony stimulating factor 1 receptor; CSF1R active protein

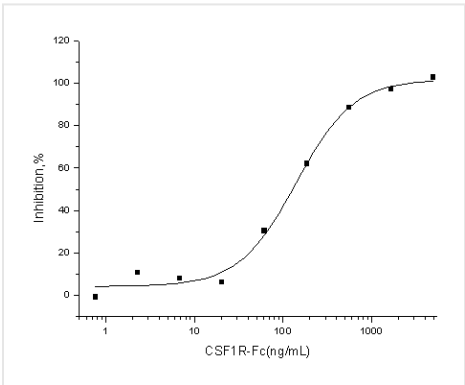
### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Purity/Purification     | >95% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Form/Format             | Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.                                                                                                                                                                                                                                                                                       |
| Sequence                | Met1-Glu51 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Species                 | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Activity                | Measured by its ability to inhibit the human CSF-induced proliferation of M <sup>2</sup> NFS <sup>2</sup> 60 mouse myelogenous leukemia lymphoblast cells. The ED50 for this effect is typically 0.05-0.3ug/mL in the presence of 3ng/mL Recombinant Human M-CSF.                                                                                                                                                                                                                                        |
| Endotoxin               | <1.0EU per ug protein as determined by the LAL method.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Predicted N Terminal    | Ile 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Tag                     | C-human IgG1-Fc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Protein Construction    | A DNA sequence encoding the human CSF1R (NP_005202.2)(Met1-Glu512) was expressed with the Fc region of human IgG1 at the C-terminus.                                                                                                                                                                                                                                                                                                                                                                     |
| Reconstitution          | A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.                                                                                                                                                                                                                                                                                                                                                                          |
| Preparation and Storage | Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.<br>In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid.<br>They are shipped out with blue ice. |

IMAGES



Application Data



SDS-PAGE

Measured by its ability to inhibit the human CSF-induced proliferation of M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED50 for this effect is typically 0.05-0.3ug/mL in the presence of 3 ng/ml Recombinant Human M-CSF.

ADDITIONAL INFORMATION

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|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for CSF1R active protein | 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 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. |
| Product Categories/Family for CSF1R active protein   | Receptor Tyrosine Kinases (RTKs) Cancer Drug Targets; AKT Signaling Pathway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| References                                           | Sherr CJ. (1990) The colony-stimulating factor 1 receptor: pleiotropy of signal-response coupling. Lymphokine Res. 9(4): 543-8.Kacinski BM. (1997) CSF-1 and its receptor in breast carcinomas and neoplasms of the female reproductive tract. Mol Reprod Dev. 46(1): 71-4.Sapi E, et al. (1999) The role of CSF-1 in normal and neoplastic breast physiology. Proc Soc Exp Biol Med. 220(1): 1-8.Sapi E. (2004) The role of CSF-1 in normal physiology of mammary gland and breast cancer: an update. Exp Biol Med (Maywood). 229(1): 1-11.Bonifer C, et al. (2008) The transcriptional regulation of the Colony-Stimulating Factor 1 Receptor (csf1r) gene during hematopoiesis. Front Biosci. 13: 549-60.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

NCBI AND UNIPROT INFORMATION

|                           |                                        |
|---------------------------|----------------------------------------|
| NCBI GI #                 | 27262659                               |
| NCBI GeneID               | 1436                                   |
| NCBI Accession #          | NP_005202.2                            |
| NCBI GenBank Nucleotide # | NM_005211.3                            |
| UniProt Accession #       | P07333; Q6LDW5; Q6LDY4; Q86VW7; D3DQG2 |
| Molecular Weight          | 107,984 Da                             |

|                                  |                                                                                                                                                                                                                                    |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI Official Full Name          | macrophage colony-stimulating factor 1 receptor                                                                                                                                                                                    |
| NCBI Official Synonym Full Names | colony stimulating factor 1 receptor                                                                                                                                                                                               |
| NCBI Official Symbol             | CSF1R                                                                                                                                                                                                                              |
| NCBI Official Synonym Symbols    | FMS; CSFR; FIM2; HDLS; C-FMS; CD115; CSF-1R; M-CSF-R                                                                                                                                                                               |
| NCBI Protein Information         | macrophage colony-stimulating factor 1 receptor; 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 |
| UniProt Protein Name             | Macrophage colony-stimulating factor 1 receptor                                                                                                                                                                                    |
| UniProt Gene Name                | <b>CSF1R</b>                                                                                                                                                                                                                       |
| UniProt Synonym Gene Names       | FMS; CSF-1-R; CSF-1R; M-CSF-R                                                                                                                                                                                                      |
| UniProt Entry Name               | CSF1R_HUMAN                                                                                                                                                                                                                        |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/hek293-active-protein/csf1r/257832>