

32-6493: MCSFR Human

Application : Functional Assay

Alternative Name : Macrophage colony-stimulating factor 1 receptor, CSF-1 receptor (EC:2.7.10.1), CSF-1-R, CSF-1R, M-CSF-R, Proto-oncogene c-Fms, CD115, CSF1R, FMS.

Description

Source: Sf9, Baculovirus cells.

Sterile filtered colorless solution.

MCSFR which is also familiar as CSF1R, is part of the type3 subfamily of receptor tyrosine kinases. MCSFR is expressed mainly on cells of the monocyte and macrophage lineage, stem cells, and in the growing placenta. Most of the biological effects of this cytokine are mediated by MCSFR. MCSFR contains an extracellular ligand-binding domain, a single membrane-spanning segment, and an intracellular tyrosine kinase domain. Originally CSF1 and this receptor were implicated as vital for normal trophoblastic implantation as well as monocyte development. The role of CSF1/CSF1R in normal mammary gland development is actually very interesting since this connection has also been discovered in the biology of breast cancer with the results of abnormal expression of CSF1 and its receptor. Likewise, in Alzheimer's disease and after brain injuries an increased level of CSF1R was found in the microglia, which causes the microglia to become more active.

MCSFR produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain containing 737 amino acids (20-517a.a.) and having a molecular mass of 82.1kDa. (Molecular size on SDS-PAGE will appear at approximately 70-100kDa). MCSFR is expressed with a 239 amino acid HlgG-His tag at C-Terminus and purified by proprietary chromatographic techniques.

Product Info

Amount : 1 µg / 5 µg

Purification : Greater than 90.0% as determined by SDS-PAGE.

Content : MCSFR protein solution (0.25mg/ml) contains Phosphate Buffered Saline (pH 7.4) and 10% glycerol.

Storage condition : Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Amino Acid : IPVIEPSVPE LVKPGATVT LRCVGNVSVE WDGPPSPHWT LYSDGSSSIL STNNATFQNT GTYRCTEPLD
PLGGSAAIHL YVKDPPARPWN VLAQEVVVE DQDALLPCLL TDPVLEAGVS LVRVRGRPLM RHTNYSFSPW
HGFTIHRAKF IQSQDYQCSA LMGGRKVMISIRLKVQKVI PGPPALTLVP AELVRIRGEA AQIVCSASSV
DVNFDVFLQH NNTKLAIPQQ SDFHNNRYQK VLTLNLDQVD FQHAGNYSCV ASNVQGHST
SMFFRVVESA YLNLSSQNLIQEVTVGEGL NLKVMVEAYP GLQGFNWTYL GPFSHDQPEP KLANATTKDT
YRHTFTLSLP RLKPSEAGRY SFLARNPGGW RALTFELTLR YPPEVSIWT FINGSGTLLC AASGYPQPNV
TWLQCSGHTD RCDEAQLVQV WDDPYPEVLS QEPFHKVTQ SLLTVETLEH NQTYECRAHN
SVGSGSWAFI PISAGATHP PDEFLLTPLE PKSCDKTHTC PPCPAPELLG GPSVFLFPK PKDTLMISRT
PEVTCVVVDV SHEDPEVKFN WYVDGVEVHN AKTKPREEQY NSTYRVSVL TVLHQDWLNG
KEYKCKVSNK ALPAPIEKTI SKAKGQPREP QVYTLPPSRD ELTKNQVSLT CLVKGFYPSD IAVEWESNGQ
PENNYKTTTP VLDSGDSFFL YSKLTVDKSR WQQGNVFSVMHEALHNHY TQKLSLSPG KHHHHHHH.

Application Note

Measured by its ability to inhibit M-CSF dependent proliferation of M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED50 for this effect is less or equal to 100ng/ml in the presence of 10 ng/ml M-CSF.