

c-Fms/CSF-1R (11-310): sc-4339 WB

BACKGROUND

c-Fms/CSF-1R, also designated macrophage colony-stimulating factor receptor (M-CSFR), FIM2 or CD115, is a transmembrane tyrosine kinase receptor belonging to the CSF1/PDGF receptor family. It is encoded by the c-Fms proto-oncogene and is expressed in mononuclear phagocytes, oocytes, decidual cells, trophoblastic cells and some myoblasts. It is important for growth and differentiation of myeloid cells and its function can be regulated by SLAP-2. c-Fms/CSF-1R is responsible for mediating all of the functions of M-CSF. M-CSF is a glycoprotein required for the proliferation and differentiation of mononuclear phagocytes, including osteoclasts. M-CSF has also been identified as an important mediator of the inflammatory response and can regulate the release of proinflammatory cytokines from macrophages.

REFERENCES

1. Timms, J.F., Carlberg, K., Gu, H., Chen, H., Kamatkar, S., Nadler, M.J., Rohrschneider, L.R. and Neel, B.G. 1998. Identification of major binding proteins and substrates for the SH2-containing protein tyrosine phosphatase SHP-1 in macrophages. *Mol. Cell. Biol.* 18: 3838-3850.
2. Cross, M., Csar, X.F., Wilson, N.J., Manes, G., Addona, T.A., Marks, D.C., Whitty, G.A., Ashman, K. and Hamilton, J.A. 2004. A novel 110 kDa form of Myosin XVIIIa (MysPDZ) is tyrosine-phosphorylated after colony-stimulating factor-1 receptor signalling. *Biochem. J.* 380: 243-253.
3. Tagoh, H., Schebesta, A., Lefevre, P., Wilson, N., Hume, D., Busslinger, M. and Bonifer, C. 2004. Epigenetic silencing of the c-Fms locus during B-lymphopoiesis occurs in discrete steps and is reversible. *EMBO J.* 23: 4275-4285.
4. Pixley, F.J., Xiong, Y., Yu, R.Y., Sahai, E.A., Stanley, E.R. and Ye, B.H. 2005. Bcl-6 suppresses Rho A activity to alter macrophage morphology and motility. *J. Cell Sci.* 118: 1873-1883.
5. Cross, M., Nguyen, T., Bogdanoska, V., Reynolds, E. and Hamilton, J.A. 2005. A proteomics strategy for the enrichment of receptor-associated complexes. *Proteomics* 5: 4754-4763.
6. Li, J., Chen, K., Zhu, L. and Pollard, J.W. 2006. Conditional deletion of the colony stimulating factor-1 receptor (c-Fms proto-oncogene) in mice. *Genesis* 44: 328-335.
7. Wei, S., Dai, X.M. and Stanley, E.R. 2006. Transgenic expression of CSF-1 in CSF-1 receptor-expressing cells leads to macrophage activation, osteoporosis, and early death. *J. Leukoc. Biol.* 80: 1445-1453.
8. Pakuts, B., Debonneville, C., Liontos, L.M., Loreto, M.P. and McGlade, C.J. 2007. The Src-like adaptor protein 2 regulates colony-stimulating factor-1 receptor signaling and downregulation. *J. Biol. Chem.* 282: 17953-17963.

SOURCE

c-Fms/CSF-1R (11-310) is expressed in *E. coli* as a 60 kDa tagged fusion protein corresponding to amino acids 11-310 of c-Fms/CSF-1R of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

c-Fms/CSF-1R (11-310) is purified from bacterial lysates (>98%) by column chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

c-Fms/CSF-1R (11-310) is suitable as a Western blotting control for sc-13949.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.