SANTA CRUZ BIOTECHNOLOGY, INC.

c-Fms/CSF-1R (0.N.179): sc-70453

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., et al. 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., et al. 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., et al. 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., et al. 2005. Bcl-6 suppresses RhoA activity to alter macrophage morphology and motility. J. Cell Sci. 118: 1873-1883.
5. Cross, M., et al. 2005. A proteomics strategy for the enrichment of receptor-associated complexes. Proteomics 5: 4754-4763.
6. Li, J., et al. 2006. Conditional deletion of the colony stimulating factor-1 receptor (c-Fms proto-oncogene) in mice. Genesis 44: 328-335.
7. Wei, S., et al. 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. Sasmono, R.T., et al. 2007. Mouse neutrophilic granulocytes express mRNA encoding the macrophage colony-stimulating factor receptor (CSF-1R) as well as many other macrophage-specific transcripts and can transdifferentiate into macrophages *in vitro* in response to CSF-1. J. Leukoc. Biol. 82: 111-123.

CHROMOSOMAL LOCATION

Genetic locus: CSF1R (human) mapping to 5q32; Csf1r (mouse) mapping to 18 E1.

SOURCE

c-Fms/CSF-1R (0.N.179) is a rat monoclonal antibody raised against the cell surface (extracellular) epitope of c-Fms/CSF-1 receptor of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

c-Fms/CSF-1R (0.N.179) is recommended for detection of c-Fms gp130 and gp150 of mouse, rat and human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

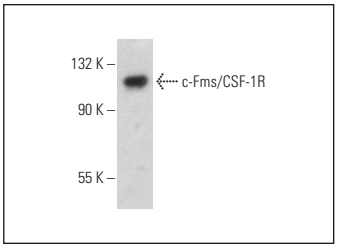
Suitable for use as control antibody for c-Fms/CSF-1R siRNA (h): sc-29220, c-Fms/CSF-1R siRNA (m): sc-29847, c-Fms/CSF-1R shRNA Plasmid (h): sc-29220-SH, c-Fms/CSF-1R shRNA Plasmid (m): sc-29847-SH, c-Fms/CSF-1R shRNA (h) Lentiviral Particles: sc-29220-V and c-Fms/CSF-1R shRNA (m) Lentiviral Particles: sc-29847-V.

Molecular Weight of unprocessed c-Fms/CSF-1R: 130 kDa.

Molecular Weight of processed c-Fms/CSF-1R: 165 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Neuro-2A whole cell lysate: sc-364185 or THP-1 cell lysate: sc-2238.

DATA



c-Fms/CSF-1R (0.N.179): sc-70453. Western blot analysis of c-Fms/CSF-1R expression in Neuro-2A whole cell lysate.

SELECT PRODUCT CITATIONS

1. Leung, R., et al. 2010. Filamin A regulates monocyte migration through Rho small GTPases during osteoclastogenesis. J. Bone Miner. Res. 25: 1077-1091.
2. Noyori, O., et al. 2019. Expression of IL-34 correlates with macrophage infiltration and prognosis of diffuse large B-cell lymphoma. Clin. Transl. Immunology 8: e1074.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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