

c-Fms/CSF-1R (3-4A4): sc-02

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.

CHROMOSOMAL LOCATION

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

SOURCE

c-Fms/CSF-1R (3-4A4) 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.

c-Fms/CSF-1R (3-4A4) is available conjugated to agarose (sc-02 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-02 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-02 PE), fluorescein (sc-02 FITC), Alexa Fluor® 488 (sc-02 AF488), Alexa Fluor® 546 (sc-02 AF546), Alexa Fluor® 594 (sc-02 AF594) or Alexa Fluor® 647 (sc-02 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-02 AF680) or Alexa Fluor® 790 (sc-02 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

c-Fms/CSF-1R (3-4A4) 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 10⁶ cells); does not inhibit binding of CSF-1 to the c-Fms/CSF-1 receptor.

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.

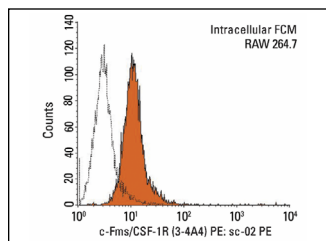
Molecular Weight of processed c-Fms/CSF-1R: 165 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or THP-1 cell lysate: sc-2238.

STORAGE

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

DATA



c-Fms/CSF-1R (3-4A4) PE: sc-02 PE. Intracellular FCM analysis of methanol permeabilized RAW 264.7 cells. Black line histogram represents the isotype control, normal rat IgG_{2b}-PE: sc-2873.

SELECT PRODUCT CITATIONS

- Matsuoka, H., et al. 1997. Expression of a kinase-defective Eph-like receptor in the normal human brain. *Biochem. Biophys. Res. Commun.* 235: 487-492.
- Chomarat, P., et al. 2000. IL-6 switches the differentiation of monocytes from dendritic cells to macrophages. *Nat. Immunol.* 1: 510-514.
- Pizzi, M., et al. 2002. Opposing roles for NFκB/Rel factors p65 and c-Rel in the modulation of neuron survival elicited by glutamate and IL-1β. *J. Biol. Chem.* 277: 20717-20723.
- Jones, G.E., et al. 2003. Requirement for PI 3-kinase γ in macrophage migration to MCP-1 and CSF-1. *Exp. Cell Res.* 290: 120-131.
- Lo, A.S., et al. 2007. Modulation of dendritic cell differentiation by colony-stimulating factor-1: role of phosphatidylinositol 3'-kinase and delayed caspase activation. *J. Leukoc. Biol.* 82: 1446-1454.
- Hiyoshi, M., et al. 2008. Interaction between Hck and HIV-1 Nef negatively regulates cell surface expression of M-CSF receptor. *Blood* 111: 243-250.
- Legoffic, A., et al. 2009. The reg4 gene, amplified in the early stages of pancreatic cancer development, is a promising therapeutic target. *PLoS ONE* 4: e7495.
- Chihara, T., et al. 2010. IL-34 and M-CSF share the receptor Fms but are not identical in biological activity and signal activation. *Cell Death Differ.* 17: 1917-1927.
- Sun, Y., et al. 2014. Protein arginine methyltransferase 6 enhances ligand-dependent and -independent activity of estrogen receptor α via distinct mechanisms. *Biochim. Biophys. Acta* 1843: 2067-2078.
- Qiao, J.H., et al. 2015. Multinucleated giant cells in atherosclerotic plaques of human carotid arteries: Identification of osteoclast-like cells and their specific proteins in artery wall. *Exp. Mol. Pathol.* 99: 654-662.

RESEARCH USE

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