SANTA CRUZ BIOTECHNOLOGY, INC.

c-Fms/CSF-1R (2-4A5): sc-01

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.

CHROMOSOMAL LOCATION

Genetic locus: CSF1R (human) mapping to 5q32.

SOURCE

c-Fms/CSF-1R (2-4A5) is a rat monoclonal antibody raised against the cell surface (extracellular) epitope of c-Fms/CSF-1R of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

c-Fms/CSF-1R (2-4A5) is available conjugated to agarose (sc-01 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-01 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-01 PE), fluorescein (sc-01 FITC), Alexa Fluor® 488 (sc-01 AF488), Alexa Fluor® 546 (sc-01 AF546), Alexa Fluor® 594 (sc-01 AF594) or Alexa Fluor® 647 (sc-01 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-01 AF680) or Alexa Fluor® 790 (sc-01 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

c-Fms/CSF-1R (2-4A5) is recommended for detection of c-Fms gp130 and gp150 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

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

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

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

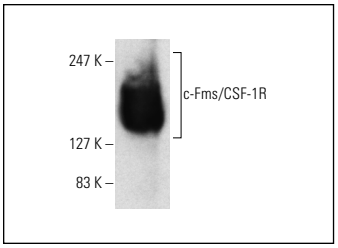
STORAGE

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.

DATA



c-Fms/CSF-1R (2-4A5): sc-01. Western blot analysis of human recombinant c-Fms/CSF-1R immunopreciptated with c-Fms/CSF-1R (2-4A5): sc-01 and detected with c-Fms/CSF-1R (H-300): sc-13949.

SELECT PRODUCT CITATIONS

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2. Fambrough, D., et al. 1999. Diverse signaling pathways activated by growth factor receptors induce broadly overlapping, rather than independent, sets of genes. Cell 97: 727-741.
3. Dewar, A.L., et al. 2005. Macrophage colony-stimulating factor receptor c-Fms is a novel target of imatinib. Blood 105: 3127-3132.
4. Kirma, N., et al. 2007. Elevated expression of the oncogene c-Fms and its ligand, the macrophage colony-stimulating factor-1, in cervical cancer and the role of transforming growth factor β1 in inducing c-Fms expression. Cancer Res. 67: 1918-1925.
5. Fuhrman, B., et al. 2008. Ox-LDL induces monocyte-to-macrophage differentiation *in vivo:* possible role for the macrophage colony stimulating factor receptor (M-CSF-R). Atherosclerosis 196: 598-607.
6. Shi, Z., et al. 2010. The neuroprotective effect of Batch-2, an aqueous extract from cat's claw *(Uncaria tomentosa)* on 6-OHDA-induced SH-SY5Y cell damage. Prog. Biochem. Biophys. 37: 769-778.
7. Nandi, S., et al. 2013. Receptor-type protein-tyrosine phosphatase ζ is a functional receptor for interleukin-34. J. Biol. Chem. 288: 21972-21986.
8. 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.
9. Crotty, E.E., et al. 2021. Medulloblastoma recurrence and metastatic spread are independent of colony-stimulating factor 1 receptor signaling and macrophage survival. J. Neurooncol. 153: 225-237.

PROTOCOLS

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