SANTA CRUZ BIOTECHNOLOGY, INC.

c-Fms/CSF-1R (D-8): sc-365719

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.

CHROMOSOMAL LOCATION

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

SOURCE

c-Fms/CSF-1R (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 943-971 at the C-terminus of c-Fms/CSF-1R of human origin.

PRODUCT

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

c-Fms/CSF-1R (D-8) is available conjugated to agarose (sc-365719 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365719 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365719 PE), fluorescein (sc-365719 FITC), Alexa Fluor® 488 (sc-365719 AF488), Alexa Fluor® 546 (sc-365719 AF546), Alexa Fluor® 594 (sc-365719 AF594) or Alexa Fluor® 647 (sc-365719 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365719 AF680) or Alexa Fluor® 790 (sc-365719 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365719 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

c-Fms/CSF-1R (D-8) is recommended for detection of c-Fms/CSF-1R of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

c-Fms/CSF-1R (D-8) is also recommended for detection of c-Fms/CSF-1R in additional species, including bovine.

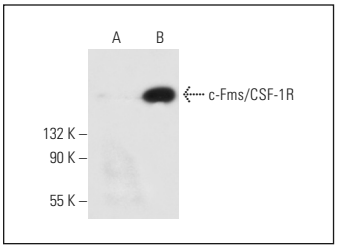
Suitable for use as control antibody for c-Fms/CSF-1R siRNA (h): sc-29220, c-Fms/CSF-1R siRNA (m): sc-29847, c-Fms/CSF-1R shRNA Plasmid (h): sc-29220-SH, c-Fms/CSF-1R shRNA Plasmid (m): sc-29847-SH, c-Fms/CSF-1R shRNA (h) Lentiviral Particles: sc-29220-V and c-Fms/CSF-1R shRNA (m) Lentiviral Particles: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

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

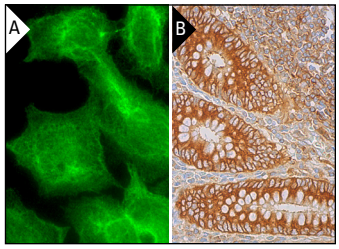
Molecular Weight of processed c-Fms/CSF-1R: 165 kDa.

Positive Controls: c-Fms/CSF-1R (m2): 293T Lysate: sc-118887, THP-1 cell lysate: sc-2238 or HL-60 whole cell lysate: sc-2209.

DATA



c-Fms/CSF-1R (D-8): sc-365719. Western blot analysis of c-Fms/CSF-1R expression in non-transfected: sc-117752 (**A**) and mouse c-Fms/CSF-1R transfected: sc-118887 (**B**) 293T whole cell lysates.



c-Fms/CSF-1R (D-8): sc-365719. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing membrane and cytoplasmic staining of glandular cells and lymphoid cells (**B**).

SELECT PRODUCT CITATIONS

1. Choi, H.K., et al. 2011. Reactive oxygen species regulate M-CSF-induced monocyte/macrophage proliferation through SHP1 oxidation. Cell. Signal. 23: 1633-1639.
2. Bencheikh, L., et al. 2019. Dynamic gene regulation by nuclear colony-stimulating factor 1 receptor in human monocytes and macrophages. Nat. Commun. 10: 1935.
3. Ding, J., et al. 2020. Angiotensin II decreases endothelial nitric oxide synthase phosphorylation via AT1R Nox/ROS/PP2A pathway. Front. Physiol. 11: 566410.

RESEARCH USE

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