

GM-CSFR α (S-50): sc-456

BACKGROUND

The human IL-3, IL-5 and GM-CSF receptors are each composed of both unique α subunits and a common β subunit. The α subunits are low-affinity ligand binding proteins while the β subunits do not themselves bind ligand, but are required for high-affinity binding by the α subunits. In contrast, the mouse IL-3 receptor has two distinct β subunits, one that functions only in IL-3 mediated cell signaling and a second that is shared with IL-5 and GM-CSF. The murine β subunits are 91% homologous at the amino acid level but only 56% homologous to the human β subunit. Although neither the murine nor the human β subunit contains tyrosine kinase domains, both activate tyrosine phosphorylation mediated signaling pathways.

CHROMOSOMAL LOCATION

Genetic locus: CSF2RA (human) mapping to Xp22.33/Yp11.32; Csf2ra (mouse) mapping to 19 D3.

SOURCE

GM-CSFR α (S-50) is a mouse monoclonal antibody raised against GM-CSFR α of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GM-CSFR α (S-50) is available conjugated to agarose (sc-456 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-456 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-456 PE), fluorescein (sc-456 FITC), Alexa Fluor[®] 488 (sc-456 AF488), Alexa Fluor[®] 546 (sc-456 AF546), Alexa Fluor[®] 594 (sc-456 AF594) or Alexa Fluor[®] 647 (sc-456 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-456 AF680) or Alexa Fluor[®] 790 (sc-456 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GM-CSFR α (S-50) is recommended for detection of GM-CSFR α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for GM-CSFR α siRNA (h): sc-35501, GM-CSFR α siRNA (m): sc-40057, GM-CSFR α shRNA Plasmid (h): sc-35501-SH, GM-CSFR α shRNA Plasmid (m): sc-40057-SH, GM-CSFR α shRNA (h) Lentiviral Particles: sc-35501-V and GM-CSFR α shRNA (m) Lentiviral Particles: sc-40057-V.

Molecular Weight of GM-CSFR α : 80 kDa.

Positive Controls: GM-CSFR α (h): 293T Lysate: sc-159381, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

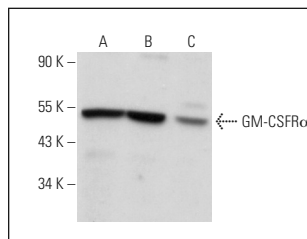
RESEARCH USE

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

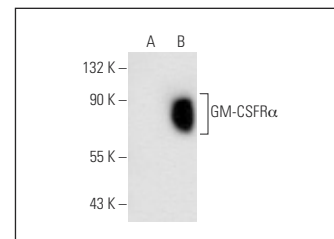
STORAGE

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

DATA



GM-CSFR α (S-50): sc-456. Western blot analysis of GM-CSFR α expression in Jurkat (A), HL-60 (B) and Hep G2 (C) whole cell lysates.



GM-CSFR α (S-50): sc-456. Western blot analysis of GM-CSFR α expression in non-transfected: sc-117752 (A) and human GM-CSFR α transfected: sc-159381 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Anders, R.A., et al. 1996. Chimeric granulocyte/macrophage colony-stimulating factor/transforming growth factor- β (TGF- β) receptors define a model system for investigating the role of homomeric and heteromeric receptors in TGF- β signaling. *J. Biol. Chem.* 271: 21758-21766.
- Nelson, B.H., et al. 1997. Requirement for an initial signal from the membrane proximal region of the interleukin 2 receptor γ chain for Janus kinase activation leading to T cell proliferation. *Proc. Natl. Acad. Sci. USA* 94: 1878-1883.
- Lee, S., et al. 1999. Cytokine receptor common β chain as a potential activator of cytokine withdrawal-induced apoptosis. *Mol. Cell. Biol.* 19: 7399-7409.
- Anzai, N., et al. 2002. C-kit associated with the transmembrane 4 superfamily proteins constitutes a functionally distinct subunit in human hematopoietic progenitors. *Blood* 99: 4413-4421.
- DeYulia, G.J., Jr., et al. 2005. Hydrogen peroxide generated extracellularly by receptor-ligand interaction facilitates cell signaling. *Proc. Natl. Acad. Sci. USA* 102: 5044-5049.
- Postiglione, L., et al. 2006. Granulocyte macrophage-colony stimulating factor receptor expression on human cardiomyocytes from end-stage heart failure patients. *Eur. J. Heart Fail.* 8: 564-570.
- Madar, S., et al. 2013. Mutant p53 attenuates the anti-tumorigenic activity of fibroblasts-secreted interferon β . *PLoS ONE* 8: e61353.
- Wagai, S., et al. 2019. UNC93B1 promotes tumoral growth by controlling the secretion level of granulocyte macrophage colony-stimulating factor in human oral cancer. *Biochem. Biophys. Res. Commun.* 513: 81-87.

PROTOCOLS

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