



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# GM-CSFR $\alpha$ (h): 293T Lysate: sc-159381

## BACKGROUND

The human IL-3, IL-5 and GM-CSF receptors are each composed of both unique  $\alpha$  subunits and a common  $\beta$  subunit. The  $\alpha$  subunits are low affinity ligand binding proteins while the  $\beta$  subunits do not themselves bind ligand, but are required for high affinity binding by the  $\alpha$  subunits (1–5). In contrast, the mouse IL-3 receptor has two distinct  $\beta$  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  $\beta$ -subunits are 91% homologous at the amino acid level but only 56% homologous to the human  $\beta$  subunit. Although neither the murine nor the human  $\beta$  subunit contains tyrosine kinase domains, both activate tyrosine phosphorylation mediated signaling pathways.

## REFERENCES

- Hayashida, K., Kitamura, R., Gorman, D.M., Yokata, T. and Miyajima, A. 1990. Molecular cloning of a second subunit of the receptor for human granulocyte-macrophage colony-stimulating factor (GM-CSF): reconstitution of a high-affinity GM-CSF receptor. *Proc. Natl. Acad. Sci. USA* 87: 9655-9659.
- Tavernier, J., Devos, R., Cornelis, S., Tuyperis, T., VanderHeydon, J., Qiers, W. and Platenok, G. 1992. A human high-affinity interleukin-5 receptor (IL-5R) is composed of an IL-5 specific chain and a  $\beta$  chain shared with the receptor for GM-CSF. *Cell* 66: 1175-1184.
- Hara, T. and Miyajima, A. 1992. Two distinct functional receptors for mouse interleukin-3. *EMBO J.* 11: 1875-1884.
- Sakamaki, K., Miyajima, I., Kitamura, T. and Miyajima, A. 1992. Critical cytoplasmic domains of the common  $\beta$  subunit of the human GM-CSF, IL-3, and IL-5 receptors for growth signal transduction and tyrosine phosphorylation. *EMBO J.* 11: 3541-3549.
- Park, L.S., Martin, U., Sorenson, R., Luhr, S., Morrissey, P.J., Cosman, D. and Larsen, A. 1992. Cloning of the low-affinity murine granulocyte-macrophage colony-stimulating factor receptor and reconstitution of a high-affinity receptor complex. *Proc. Natl. Acad. Sci. USA* 89: 4295-4299.
- Miyajima, A., Kitamura, T., Harada, N., Yokota, T. and Arai, K. 1992. Cytokine receptors and signal transduction. *Annu. Rev. Immunol.* 10: 295-331.
- Goodall, G.J., Bagley, C.J., Vadas, M.A. and Lopez, A.F. 1993. A model for the interaction of the GM-CSF, IL-3 and IL-5 receptors with their ligands. *Growth Factors* 8: 87-97.
- Rao, P., Kitamura, T., Miyajima, A. and Mufson, R.A. 1995. Human IL-3 receptor signaling: rapid induction of phosphatidylcholine hydrolysis is independent of protein kinase C but dependent on tyrosine phosphorylation in transfected NIH 3T3 cells. *J. Immunol.* 154: 1664-1674.

## CHROMOSOMAL LOCATION

Genetic locus: CSF2RA (human) mapping to Xp22.33/Yp11.32.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PRODUCT

GM-CSFR $\alpha$  (h): 293T Lysate represents a lysate of human GM-CSFR $\alpha$  transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

GM-CSFR $\alpha$  (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive GM-CSFR $\alpha$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

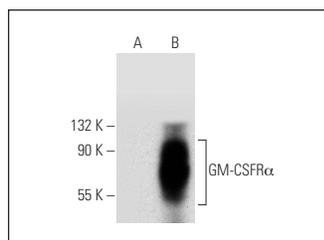
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GM-CSFR $\alpha$  (G-12): sc-398971 is recommended as a positive control antibody for Western Blot analysis of enhanced human GM-CSFR $\alpha$  expression in GM-CSFR $\alpha$  transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

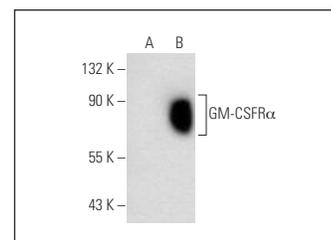
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



GM-CSFR $\alpha$  (G-12): sc-398971. Western blot analysis of GM-CSFR $\alpha$  expression in non-transfected: sc-117752 (A) and human GM-CSFR $\alpha$  transfected: sc-159381 (B) 293T whole cell lysates.



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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.