

# G-CSFR (A-7): sc-514639

## BACKGROUND

The diverse biological activities of G-CSF are initiated by the binding of G-CSF to a specific receptor (G-CSFR) that belongs to the cytokine/hematopoietic receptor superfamily. In contrast to the majority of hematopoietic receptors that are activated through the formation of heteromeric complexes composed of  $\alpha$ ,  $\beta$  and sometimes  $\gamma$  subunits, G-CSFR proteins are believed to form homodimeric complexes upon ligand binding. Four distinct alternative splice variants of G-CSFR have been described, one of which exists as a soluble receptor protein. Although G-CSFR lacks consensus motifs in its cytoplasmic domains that are characteristic of kinase activities, certain sequences have been identified that are conserved among several members of the cytokine receptor superfamily. For example, the carboxy terminal regions of G-CSFR contain a domain, designated box 3, that is only shared with the IL-6R subunit, gp130.

## REFERENCES

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2. Fukunaga, R., et al. 1990. Three different mRNAs encoding human granulocyte colony-stimulating factor receptor. *Proc. Natl. Acad. Sci. USA* 87: 8702-8706.
3. Larsen, A., et al. 1990. Expression cloning of human granulocyte colony-stimulating factor receptor: a structural mosaic of hematopoietin receptor, immunoglobulin, and fibronectin domains. *J. Exp. Med.* 172: 1559-1570.
4. Miyajima, A., et al. 1992. Cytokine receptors and signal transduction. *Ann. Rev. Immunol.* 10: 295-331.
5. Saito, M., et al. 1992. Molecular cloning of a murine IL-6 receptor-associated signal transducer, gp130, and its regulated expression *in vivo*. *J. Immunol.* 148: 4066-4071.
6. Cosman, D. 1993. The hematopoietin receptor superfamily. *Cytokine* 5: 95-106.
7. Ishizaka-Ikeda, E., et al. 1993. Signal transduction mediated by growth hormone receptor and its chimeric molecules with the granulocyte colony-stimulating factor. *J. Biol. Chem.* 265: 123-127.

## CHROMOSOMAL LOCATION

Genetic locus: CSF3R (human) mapping to 1p34.3.

## SOURCE

G-CSFR (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 77-99 within an N-terminal extracellular domain of G-CSFR of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

G-CSFR (A-7) is recommended for detection of G-CSFR of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for G-CSFR siRNA (h): sc-40006, G-CSFR shRNA Plasmid (h): sc-40006-SH and G-CSFR shRNA (h) Lentiviral Particles: sc-40006-V.

Molecular Weight of normal G-CSFR: 85-90 kDa.

Molecular Weight of glycosylated G-CSFR: 105-110 kDa.

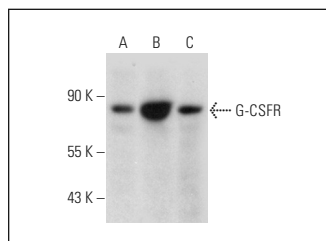
Molecular Weight of heavily glycosylated G-CSFR: 130-135 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or AML-193 whole cell lysate: sc-364182.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



G-CSFR (A-7): sc-514639. Western blot analysis of G-CSFR expression in K-562 (A), A-431 (B) and AML-193 (C) whole cell lysates.

## 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.