# G-CSFR (h): 293T Lysate: sc-116475



The Power to Question

#### **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 contains a domain, designated box 3, that is only shared with the IL-6R subunit, gp130.

## **REFERENCES**

- 1. Bazan, J.F. 1989. A novel family of growth factor receptors: a common binding domain in the growth hormone, Prolactin, erythropoietin and IL-6 receptors, and the p75 IL-2 receptor  $\beta$  chain. Biochem. Biophys. Res. Commun. 164: 788-795.
- 2. 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.
- Fukunaga, R., et al. 1990. Three different mRNAs encoding human granulocyte colony-stimulating factor receptor. Proc. Natl. Acad. Sci. USA 87: 8702-8706.
- 4. Miyajima, A., et al. 1992. Cytokine receptors and signal transduction. Annu. Rev. Immunol. 10: 295-331.
- 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.
- 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. Proc. Natl. Acad. Sci. USA 90: 123-127.
- 8. Hiraoka, O., et al. 1994. Ligand binding domain of granulocyte colonystimulating factor receptor. J. Biol. Chem. 269: 22412-22419.
- Dong, F., et al. 1995. A point mutation in the granulocyte colony-stimulating factor receptor (G-CSF-R) gene in a case of acute myeloid leukemia results in the overexpression of a novel G-CSF-R isoform. Blood 85: 902-911.

#### **CHROMOSOMAL LOCATION**

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

### **PRODUCT**

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

## **APPLICATIONS**

G-CSFR (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive G-CSFR antibodies. Recommended use: 10-20 µl per lane.

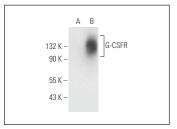
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

G-CSFR (F-11): sc-393698 is recommended as a positive control antibody for Western Blot analysis of enhanced human G-CSFR expression in G-CSFR 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-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### **DATA**



G-CSFR (F-11): sc-393698. Western blot analysis of G-CSFR expression in non-transfected: sc-117752 (**A**) and human G-CSFR transfected: sc-116475 (**B**) 293T whole cell lysates.

#### **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.

#### **RESEARCH USE**

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

### **PROTOCOLS**

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