SANTA CRUZ BIOTECHNOLOGY, INC.

G-CSFR (H-176): sc-9173

SANTA CRUZ BIOTECHNOLOGY
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 α, β and sometimes γ 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.

CHROMOSOMAL LOCATION

Genetic locus: CSF3R (human) mapping to 1p34.3; Csf3r (mouse) mapping to 4 D2.2.

SOURCE

G-CSFR (H-176) is a rabbit polyclonal antibody raised against amino acids 25-200 mapping near the N-terminus of G-CSFR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

G-CSFR (H-176) is recommended for detection of G-CSFR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) 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 siRNA (m): sc-40007, G-CSFR shRNA Plasmid (h): sc-40006-SH, G-CSFR shRNA Plasmid (m): sc-40007-SH, G-CSFR shRNA (h) Lentiviral Particles: sc-40006-V and G-CSFR shRNA (m) Lentiviral Particles: sc-40007-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: M1 whole cell lysate: sc-364782 or G-CSFR (h): 293T Lysate: sc-116475.

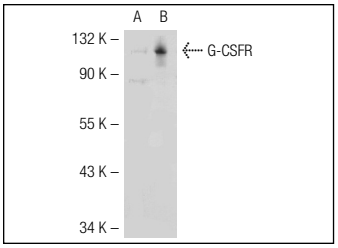
STORAGE

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

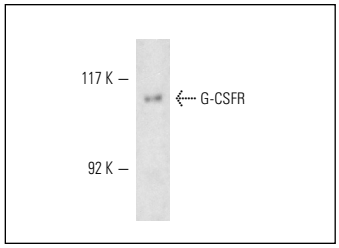
RESEARCH USE

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

DATA



G-CSFR (H-176): sc-9173. 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.



G-CSFR (H-176): sc-9173. Western blot analysis of G-CSFR expression in M1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Vollmar, B., et al. 2002. Age-associated loss of immunomodulatory protection by granulocyte-colony stimulating factor in endotoxic rats. Shock 18: 348-354.
2. Chakraborty, A., et al. 2004. Granulocyte colony-stimulating factor receptor signals for β1-integrin expression and adhesion in bladder cancer. Urology 63: 177-183.
3. Schneider, A., et al. 2005. The hematopoietic factor G-CSF is a neuronal ligand that counteracts programmed cell death and drives neurogenesis. J. Clin. Invest. 115: 2083-2098.
4. Lombaert, I.M., et al. 2006. Mobilization of bone marrow stem cells by granulocyte colony-stimulating factor ameliorates radiation-induced damage to salivary glands. Clin. Cancer Res. 12: 1804-1812.
5. Matchett, G.A., et al. 2007. The effect of granulocyte-colony stimulating factor in global cerebral ischemia in rats. Brain Res. 1136: 200-207.
6. Park, K.W., et al. 2008. G-CSF exerts dual effects on endothelial cells—opposing actions of direct eNOS induction versus indirect CRP elevation. J. Mol. Cell. Cardiol. 45: 670-678.
7. Schweizerhof, M., et al. 2009. Hematopoietic colony-stimulating factors mediate tumor-nerve interactions and bone cancer pain. Nat. Med. 15: 802-807.
8. Shimoji, K., et al. 2010. G-CSF promotes the proliferation of developing cardiomyocytes *in vivo* and in derivation from ESCs and iPSCs. Cell Stem Cell 6: 227-237.