

# IGF-I (G-17): sc-1422

## BACKGROUND

Insulin-like growth factor I, or IGF-I, is a ubiquitous peptide that acts in both an autocrine and paracrine fashion to stimulate the growth of vascular smooth muscle cells. In addition, IGF-I regulates renal function, growth and repair, is critically involved in bone formation and resorption and has been implicated in mediating aspects of the immune response. IGF function is modulated by at least six circulating IGF-binding proteins, designated IGFBP1-6, which associate with the soluble growth factor. While the function of IGF-II is less well understood, overexpression of the protein in mice suggests that IGF-II may play a regulatory role in Insulin sensitivity and glucose uptake. Both IGF-I and IGF-II exert their biological effects through a common receptor, designated IGF-IR. Like the Insulin receptor, IGF-IR is composed of two extracellular  $\alpha$  chains and two signal transducing  $\beta$  chains cross-linked by disulfide bonds.

## CHROMOSOMAL LOCATION

Genetic locus: IGF1 (human) mapping to 12q23.2; Igf1 (mouse) mapping to 10 C1.

## SOURCE

IGF-I (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of IGF-I of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-1422 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

IGF-I (G-17) is recommended for detection of IGF-IA and IGF-IB of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

IGF-I (G-17) is also recommended for detection of IGF-IA and IGF-IB in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for IGF-I siRNA (h): sc-37193, IGF-I siRNA (m): sc-37194, IGF-I shRNA Plasmid (h): sc-37193-SH, IGF-I shRNA Plasmid (m): sc-37194-SH, IGF-I shRNA (h) Lentiviral Particles: sc-37193-V and IGF-I shRNA (m) Lentiviral Particles: sc-37194-V.

Molecular Weight of IGF-1A/IGF-1B/3 isoforms: 22/17/15 kDa.

## RESEARCH USE

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

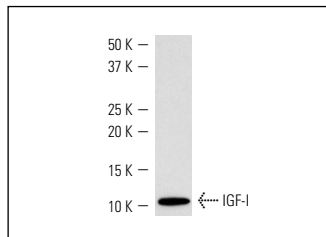
## PROTOCOLS

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

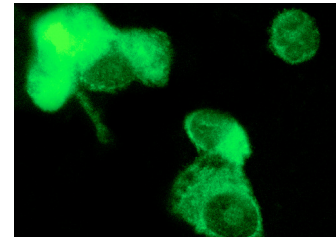
## STORAGE

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

## DATA



IGF-I (G-17): sc-1422. Western blot analysis of human recombinant IGF-I.



IGF-I (G-17): sc-1422. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Orimo, A., et al. 2001. Cancer-associated myofibroblasts possess various factors to promote endometrial tumor progression. *Clin. Cancer Res.* 7: 3097-3105.
- Piao, W., et al. 2008. Insulin-like growth factor-I receptor blockade by a specific tyrosine kinase inhibitor for human gastrointestinal carcinomas. *Mol. Cancer Ther.* 7: 1483-1493.
- Toulon, A., et al. 2009. A role for human skin-resident T cells in wound healing. *J. Exp. Med.* 206: 743-750.
- Bogazzi, F., et al. 2009. Reduced colonic apoptosis in mice overexpressing bovine growth hormone occurs through changes in several kinase pathways. *Growth Horm. IGF Res.* 19: 432-441.
- Adachi, Y., et al. 2009. Insulin-like growth factor-I receptor blockade reduces the invasiveness of gastrointestinal cancers via blocking production of matrilysin. *Carcinogenesis* 30: 1305-1313.
- Zhao, Y., et al. 2010. Perfluorooctanoic acid effects on steroid hormone and growth factor levels mediate stimulation of peripubertal mammary gland development in C57BL/6 mice. *Toxicol. Sci.* 115: 214-224.
- Li, H., et al. 2011. Insulin-like growth factor-I receptor blockade reduces tumor angiogenesis and enhances the effects of bevacizumab for a human gastric cancer cell line, MKN45. *Cancer* 117: 3135-3147.
- Li, L., et al. 2011. Caloric restriction promotes the reproductive capacity of female rats via modulating the level of Insulin-like growth factor-1 (IGF-1). *Gen. Comp. Endocrinol.* 174: 232-237.

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Try **IGF-I (W18): sc-74116**, our highly recommended monoclonal alternative to IGF-I (G-17).