SANTA CRUZ BIOTECHNOLOGY, INC.

IGF-I (E-3): sc-518063

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 a chains and two signal transducing b chains cross-linked by disulfide bonds.

REFERENCES

1. Rabkin, R., Brody, M., Lu, L.H., Chan, C., Shaheen, A.M. and Gillett, N. 1995. Expression of the genes encoding the rat renal Insulin-like growth factor-I system. J. Am. Soc. Nephrol. 6: 1511-1518.
2. Hayden, J.M., Mohan, S. and Baylink, D.J. 1995. The Insulin-like growth factor system and the coupling of formation to resorption. Bone 17: 93S-98S.
3. Auernhammer, C.J. and Strasburger, C.J. 1995. Effects of growth hormone and Insulin-like growth factor-I on the immune system. Eur. J. Endocrinol. 133: 635-645.
4. Motani, A., Rutherford, C., Anggard, E.E. and Ferns, G.A. 1995. Insulin-like growth factor binding protein-I inhibits arterial smooth muscle cell proliferation *in vitro* but does not reduce the neointimal response to balloon catheter injury. Atherosclerosis 118: 57-66.
5. Delafontaine, P., Anwar, A., Lou, H. and Ku, L. 1996. G protein-coupled and tyrosine kinase receptors: evidence that activation of the Insulin-like growth factor-I receptor is required for Thrombin-induced mitogenesis of rat aortic smooth muscle cells. J. Clin. Invest. 97: 139-145.
6. Jiang, Y., Chan, J.L., Zong, C.S. and Wang, L.H. 1996. Effect of tyrosine mutations on the kinase activity and transforming potential of an oncogenic human Insulin-like growth factor-I receptor. J. Biol. Chem. 271: 160-167.
7. Rossetti, L., Barzilai, N., Chen, W., Harris, T., Yang, D. and Rogler, C.E. 1996. Hepatic overexpression of Insulin-like growth factor-II in adulthood increases basal and Insulin-stimulated glucose disposal in conscious mice. J. Biol. Chem. 271: 203-208.

CHROMOSOMAL LOCATION

Genetic locus: IGF1 (human) mapping to 12q23.2.

SOURCE

IGF-I (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 72-98 within an internal region of IGF-I of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

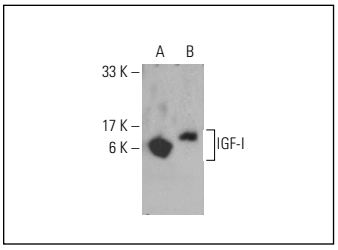
IGF-I (E-3) is recommended for detection of IGF-I of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

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

Positive Controls: human brain extract: sc-364375.

DATA



IGF-I (E-3): sc-518063. Western blot analysis of IGF-I expression in human recombinant IGF-I fusion protein (**A**) and human brain tissue extract (**B**).

STORAGE

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

PROTOCOLS

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