SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP4 (m): 293T Lysate: sc-125487

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Insulin-like growth factor-binding proteins, or IGFBPs, are a family of homologous proteins that have co-evolved with the IGFs. They serve not only as shuttle molecules for the soluble IGFs, but also confer a level of regulation to the IGF signaling system. Physical association of the IGFBPs with IGF influences the bio-availability of the growth factors, as well as their concentration and distribution in the extracellular environment. In addition, the IGFBPs appear to have biological activity independent of the IGFs. Seven IGFBPs have thus far been described, each differing in their tissue distribution, half-lives and modulation of IGF interactions with their receptors. For instance, IGFBP1 is negatively regulated by Insulin production. The IGFBP1 gene is expressed at a high level during fetal liver development and in response to nutritional changes and diabetes. It has been suggested that IGFBP2 functions as chaperone, escorting IGFs to their target tissues. It is expressed in several human tissues including fetal eye and fetal brain. IGFBP3 is the most abundant IGFBP and is complexed with roughly 80% of the serum IGFs. Both IGFBP3 and IGFBP4 are released by dermal fibroblasts in response to incision injury. IGFBP5 is secreted by myoblasts and may play a key role in muscle differentiation. IGFBP6 differs from other IGFBPs in having the highest affinity for IGF-II. Glycosylated human IGFBP6 is expressed in Chinese hamster ovary (CHO) cells, whereas nonglycosylated recombinant human IGFBP6 is expressed in *E. coli*. IGFBP7 is a secreted protein and binds both IGF-I and IGF-II with a relatively low affinity. It stimulates prostacyclin production and may also function as a growth-suppressing factor.

REFERENCES

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4. Baxter, R.C. 1995. Insulin-like growth factor binding proteins as gluco-regulators. Metabol. Clin. Exp. 44: 12-17.
5. Kelley, K.M., et al. 1996. Insulin-like growth factor-binding proteins (IGFBPs) and their regulatory dynamics. Intl. J. Biochem. Cell Biol. 28: 619-637.
6. Hathaway, C.L., et al. 1996. Differential expression of IGFBPs by normal and hypertrophic scar fibroblasts. J. Surg. Res. 60: 156-162.
7. Oh, Y., et al. 1996. Synthesis and characterization of Insulin-like growth factor-binding protein (IGFBP)7. Recombinant human Mac25 protein specifically binds IGF-I and -II. J. Biol. Chem. 271: 30322-30325.

CHROMOSOMAL LOCATION

Genetic locus: Igfbp4 (mouse) mapping to 11 D.

PRODUCT

IGFBP4 (m): 293T Lysate represents a lysate of mouse IGFBP4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

IGFBP4 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive IGFBP4 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.

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.