SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP2 (H-75): sc-13096

BACKGROUND

The Insulin-like growth factor-binding proteins (IGFBPs), a family of homologous proteins that have co-evolved with the IGFs, 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, and their concentration and distribution in the extracellular environment. The IGFBPs also appear to have biological activity independent of the IGFs. Seven IGFBPs have been described, each differing in their tissue distribution, half-lives and modulation of IGF interactions with their receptors. 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. IGFBP2, which may function as a chaperone, escorting IGFs to their target tissues, is expressed in several human tissues including fetal eye and fetal brain. IGFBP3, the most abundant IGFBP, 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 non-glycosylated recombinant human IGFBP-6 is expressed in *E. coli*. IGFBP7, a secreted protein that binds both IGF-I and IGF-II with a relatively low affinity, stimulates prostacyclin production and may also function as a growth-suppressing factor.

REFERENCES

1. Lee, J., et al. 1994. Structure and localization of the IGFBP-1 gene and its expression during liver regeneration. Hepatology 19: 656-665.
2. Schmid, C. 1995. Insulin-like growth factors. Cell Biol. Intl. 19: 445-457.
3. Binoux, M. 1995. The IGF system in metabolism regulation. Diabetes Metabol. 21: 330-337.
4. Baxter, R.C. 1995. Insulin-like growth factor binding proteins as gluco-regulators. Metabol. Clin. Exp. 44: 12-17.
5. Hathaway, C.L., et al. 1996. Differential expression of IGFBPs by normal and hypertrophic scar fibroblasts. J. Surg. Res. 60: 156-162.

CHROMOSOMAL LOCATION

Genetic locus: IGFBP2 (human) mapping to 2q35; Igfbp2 (mouse) mapping to 1 C3.

SOURCE

IGFBP2 (H-75) is a rabbit polyclonal antibody raised against amino acids 1-75 of IGFBP2 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.

STORAGE

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

APPLICATIONS

IGFBP2 (H-75) is recommended for detection of precursor and mature IGFBP2 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 IGFBP2 siRNA (h): sc-37195, IGFBP2 siRNA (m): sc-39586, IGFBP2 shRNA Plasmid (h): sc-37195-SH, IGFBP2 shRNA Plasmid (m): sc-39586-SH, IGFBP2 shRNA (h) Lentiviral Particles: sc-37195-V and IGFBP2 shRNA (m) Lentiviral Particles: sc-39586-V.

Molecular Weight of IGFBP2: 36 kDa.

Positive Controls: T98G cell lysate: sc-2294, MES-SA/Dx5 cell lysate: sc-2284 or MIA PaCa-2 cell lysate: sc-2285.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Namba, R., et al. 2004. Molecular characterization of the transition to malignancy in a genetically engineered mouse-based model of ductal carcinoma *in situ*. Mol. Cancer Res. 2: 453-463.
2. Hunter, K.D., et al. 2006. Divergent routes to oral cancer. Cancer Res. 66: 7405-7413.
3. Chen, X., et al. 2012. Insulin-like growth factor and fibroblast growth factor expression profiles in growth-restricted fetal sheep pancreas. Exp. Biol. Med. 237: 524-529.

RESEARCH USE

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