SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP5 (H-100): sc-13093

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: IGFBP5 (human) mapping to 2q35; Igfbp5 (mouse) mapping to 1 C3.

SOURCE

IGFBP5 (H-100) is a rabbit polyclonal antibody raised against amino acids 81-180 of IGFBP5 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

IGFBP5 (H-100) is recommended for detection of precursor and mature IGFBP5 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). IGFBP5 (H-100) is also recommended for detection of precursor and mature IGFBP5 in additional species, including equine, canine, bovine and porcine.

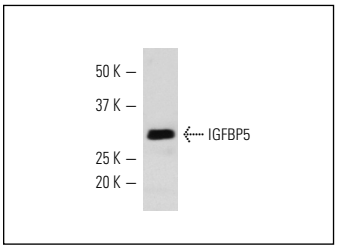
Suitable for use as control antibody for IGFBP5 siRNA (h): sc-39591, IGFBP5 siRNA (m): sc-39592, IGFBP5 shRNA Plasmid (h): sc-39591-SH, IGFBP5 shRNA Plasmid (m): sc-39592-SH, IGFBP5 shRNA (h) Lentiviral Particles: sc-39591-V and IGFBP5 shRNA (m) Lentiviral Particles: sc-39592-V.

Molecular Weight of IGFBP5: 30 kDa.

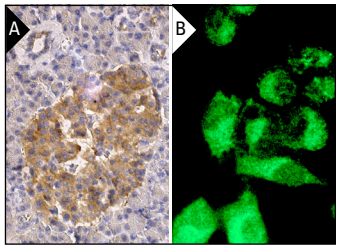
STORAGE

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

DATA



IGFBP5 (H-100): sc-13093. Western blot analysis of IGFBP5 expression in rat adrenal gland tissue extract.



IGFBP5 (H-100): sc-13093. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans (**A**). Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Han, X., et al. 2003. IGF-1 signaling enhances cell survival in periodontal ligament fibroblasts vs. gingival fibroblasts. J. Dent. Res. 82: 454-459.
2. Santosh, V., et al. 2010. Grade-specific expression of Insulin-like growth factor-binding proteins-2, -3, and -5 in astrocytomas: IGFBP-3 emerges as a strong predictor of survival in patients with newly diagnosed glioblastoma. Cancer Epidemiol. Biomarkers Prev. 19: 1399-1408.
3. Polanco, T.A., et al. 2010. Fetal alcohol exposure increases mammary tumor susceptibility and alters tumor phenotype in rats. Alcohol. Clin. Exp. Res. 34: 1879-1887.
4. Wieteska-Skrzeczynska, W., et al. 2011. Growth factor and cytokine interactions in myogenesis. Part II. Expression of IGF binding proteins and protein kinases essential for myogenesis in mouse C2C12 myogenic cells exposed to TNF-α and IFN-γ. Pol. J. Vet. Sci. 14: 425-431.
5. Rahimov, F., et al. 2011. Gene expression profiling of skeletal muscles treated with a soluble activin type IIB receptor. Physiol. Genomics 43: 398-407.
6. Kulkarni, A., et al. 2012. Expression pattern and prognostic significance of IGFBP isoforms in anaplastic astrocytoma. Pathol. Oncol. Res. 18: 961-967.

RESEARCH USE

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