SANTA CRUZ BIOTECHNOLOGY, INC.

# IGFBP6 (C-20): sc-6007

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*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, IGFBP-1 is negatively regulated by insulin production. The IGFBP-1 gene is expressed at a high level during fetal liver development and in response to nutritional changes and diabetes. It has been suggested to function as chaperone, escorting IGFs to their target tissues. It is expressed in several human tissues including fetal eye and fetal brain. IGFBP-3 is the most abundant IGFBP and is complexed with roughly 80% of the serum IGFs. Both IGFBP-3 and IGFBP-4 are released by dermal fibroblasts in response to incision injury. IGFBP-5 is secreted by myoblasts and may play a key role in muscle differentiation. IGFBP-6 differs from other IGFBPs in having the highest affinity for IGF-II. Glycosylated human IGFBP-6 is expressed in Chinese hamster ovary (CHO) cells, whereas nonglycosylated recombinant human IGFBP-6 is expressed in *E. coli*. IGFBP-7 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


1. Lee, J., et al. 1994. Structure and localization of the IGFBP1 gene and its expression during liver regeneration. Hepatology 19: 656-665.
2. Schmid, C. 1995. Insulin-like growth factors. Cell Biol. Int. 19: 445-457.


## CHROMOSOMAL LOCATION

Genetic locus: IGFBP6 (human) mapping to 12q13.13.

## SOURCE

IGFBP6 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IGFBP6 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.

Blocking peptide available for competition studies, sc-6007 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

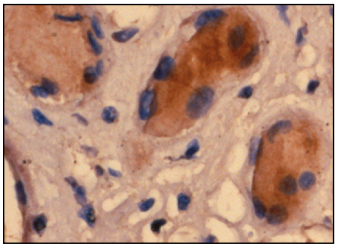
IGFBP6 (C-20) is recommended for detection of precursor and mature IGFBP6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IGFBP6 siRNA (h): sc-37231, IGFBP6 shRNA Plasmid (h): sc-37231-SH and IGFBP6 shRNA (h) Lentiviral Particles: sc-37231-V.

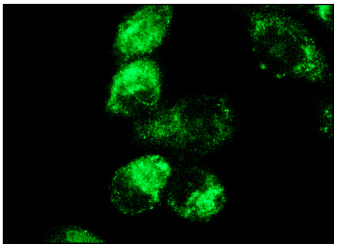
Molecular Weight of IGFBP6: 29 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285.

## DATA



IGFBP6 (C-20): sc-6007. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tumor showing cytoplasmic localization.



IGFBP6 (C-20): sc-6007. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS


1. Gotz, W., et al. 2001. Immunohistochemical localization of components of the insulin-like growth factor-system in human deciduous teeth. Connect. Tissue Res. 42: 291-302.
2. Denys, H., et al. 2004. Identification of IGFBP6 as a significantly downregulated gene by β-catenin in desmoid tumors. Oncogene 23: 654-664.
3. Gielen, S.C., et al. 2005. Steroid-modulated proliferation of human endometrial carcinoma cell lines: any role for insulin-like growth factor signaling?. J. Soc. Gynecol. Investig. 12: 58-64.
4. Miyamoto, S., et al. 2007. Matrix metalloproteinase-7 triggers the matricrine action of insulin-like growth factor-II via proteinase activity on insulin-like growth factor binding protein 2 in the extracellular matrix. Cancer Sci. 98: 685-691.
5. Xie, L., et al. 2013. The frontal cortex IGF system is down regulated in the term, intrauterine growth restricted fetal baboon. Growth Horm. IGF Res. 23: 187-192.



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Try **IGFBP6 (1A8): sc-293295**, our highly recommended monoclonal alternative to IGFBP6 (C-20).