

IGFBP5 (C-18): sc-6006

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 IGFBP-1 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: IGFBP5 (human) mapping to 2q35; Igfbp5 (mouse) mapping to 1 C3.

SOURCE

IGFBP5 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-6006 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

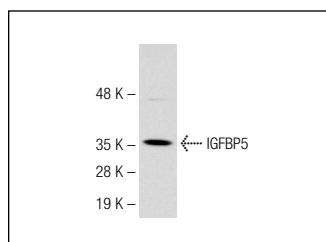
IGFBP5 (C-18) is recommended for detection of precursor and mature IGFBP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 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 (C-18) is also recommended for detection of precursor and mature IGFBP5 in additional species, including equine, canine, bovine and porcine.

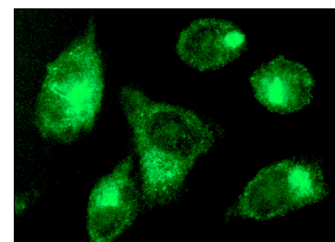
Suitable for use as control antibody for IGFBP5 siRNA (h): sc-39591, IGFBP5 siRNA (m): sc-39592, IGFBP5 shRNA Plasmid (h): sc-39591-SH, IGFBP5 shRNA Plasmid (m): sc-39592-SH, IGFBP5 shRNA (h) Lentiviral Particles: sc-39591-V and IGFBP5 shRNA (m) Lentiviral Particles: sc-39592-V.

Molecular Weight of IGFBP5: 30 kDa.

DATA



IGFBP5 (C-18): sc-6006. Western blot analysis of IGFBP5 expression in Hep G2 whole cell lysate.



IGFBP5 (C-18): sc-6006. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Tanno, B., et al. 2002. Expression of Insulin-like growth factor-binding protein 5 in neuroblastoma cells is regulated at the transcriptional level by c-Myb and B-Myb via direct and indirect mechanisms. *J. Biol. Chem.* 277: 23172-23180.
2. Dupont, J., et al. 2002. PTEN overexpression suppresses proliferation and differentiation and enhances apoptosis of the mouse mammary epithelium. *J. Clin. Invest.* 110: 815-825.
3. 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.
4. Liu, X., et al. 2014. Inactivation of RARβ inhibits Wnt1-induced mammary tumorigenesis by suppressing epithelial-mesenchymal transitions. *Nucl. Recept. Signal.* 12: e004.

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Try **IGFBP5 (D-6): sc-515116** or **IGFBP5 (G-7): sc-515184**, our highly recommended monoclonal alternatives to IGFBP5 (C-18).