

# IGFBP1 (H-120): sc-13097

## 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 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 IGFBP-6 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

- Lee, J., et al. 1994. Structure and localization of the IGFBP-1 gene and its expression during liver regeneration. *Hepatology* 19: 656-665.
- Schmid, C. 1995. Insulin-like growth factors. *Cell Biol. Intl.* 19: 445-457.
- Binoux, M. 1995. The IGF system in metabolism regulation. *Diabetes Metabol.* 21: 330-337.
- Baxter, R.C. 1995. Insulin-like growth factor binding proteins as glucoregulators. *Metabol. Clin. Exp.* 44: 12-17.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: IGFBP1 (human) mapping to 7p12.3; *Igfbp1* (mouse) mapping to 11 A1.

## SOURCE

IGFBP1 (H-120) is a rabbit polyclonal antibody raised against amino acids 121-240 of IGFBP1 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.

## RESEARCH USE

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

## APPLICATIONS

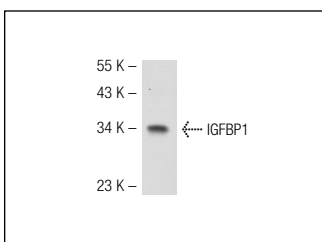
IGFBP1 (H-120) is recommended for detection of precursor and mature IGFBP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 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).

Suitable for use as control antibody for IGFBP1 siRNA (h): sc-39584, IGFBP1 siRNA (m): sc-39585, IGFBP1 shRNA Plasmid (h): sc-39584-SH, IGFBP1 shRNA Plasmid (m): sc-39585-SH, IGFBP1 shRNA (h) Lentiviral Particles: sc-39584-V and IGFBP1 shRNA (m) Lentiviral Particles: sc-39585-V.

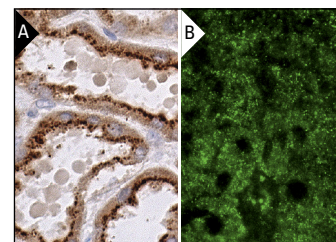
Molecular Weight of IGFBP1: 36 kDa.

Positive Controls: rat liver extract: sc-2395, Hep G2 cell lysate: sc-2227 or MIA PaCa-2 cell lysate: sc-2285.

## DATA



IGFBP1 (H-120): sc-13097. Western blot analysis of IGFBP1 expression Hep G2 whole cell lysate.



IGFBP1 (H-120): sc-13097. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing granular staining of cytoplasmic apical side of cells in tubules (A). Immunofluorescence staining of normal mouse liver frozen section showing cytoplasmic staining (B).

## SELECT PRODUCT CITATIONS

- Gellersen, B., et al. 2007. Expression of the metastasis suppressor KAI1 in decidual cells at the human maternal-fetal interface. *Am. J. Pathol.* 170: 126-139.
- Sherafat-Kazemzadeh, R., et al. 2011. Parathyroid hormone-like hormone (PTHrP) represses decidualization of human uterine fibroblast cells by an autocrine/paracrine mechanism. *J. Clin. Endocrinol. Metab.* 96: 509-514.

## STORAGE

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


 MONOS  
Satisfaction  
Guaranteed

Try **IGFBP1 (H-5): sc-55474** or **IGFBP1 (H-3): sc-25257**, our highly recommended monoclonal alternatives to IGFBP1 (H-120).