SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP2 (1F6F6): sc-130070

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 that 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 IGFBP6 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.

CHROMOSOMAL LOCATION

Genetic locus: IGFBP2 (human) mapping to 2q35.

SOURCE

IGFBP2 (1F6F6) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 180-328 of IGFBP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IGFBP2 (1F6F6) is recommended for detection of IGFBP2 of 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 IGFBP2 siRNA (h): sc-37195, IGFBP2 shRNA Plasmid (h): sc-37195-SH and IGFBP2 shRNA (h) Lentiviral Particles: sc-37195-V.

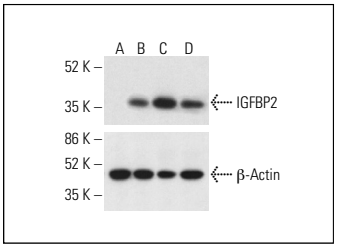
Molecular Weight of IGFBP2: 36 kDa.

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

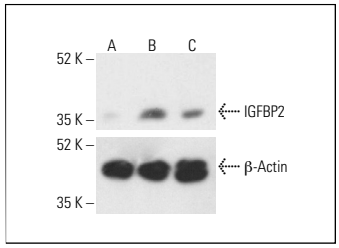
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IGFBP2 (1F6F6): sc-130070. Western blot analysis of IGFBP2 expression in untreated (**A**) and chemically-treated (**B**, **C**, **D**) NIH/3T3 whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



IGFBP2 (1F6F6): sc-130070. Western blot analysis of IGFBP2 expression in untreated (**A**) and chemically-treated (**B**, **C**) Jurkat whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

1. Zhu, H., et al. 2015. Inhibition of IGFBP2 improves the sensitivity of bladder cancer cells to cisplatin via upregulating the expression of maspin. Int. J. Mol. Med. 36: 595-601.
2. Sun, L., et al. 2022. IGFBP2 drives regulatory T cell differentiation through Stat3/IDO signaling pathway in pancreatic cancer. J. Pers. Med. 12: 2005.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.