SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP2 (C-10): sc-25285

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 bioavailability 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: IGFBP2 (human) mapping to 2q35.

SOURCE

IGFBP2 (C-10) is a mouse monoclonal antibody raised against amino acids 1-75 of Insulin-like growth factor binding protein 2 (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.

IGFBP2 (C-10) is available conjugated to agarose (sc-25285 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-25285 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25285 PE), fluorescein (sc-25285 FITC), Alexa Fluor® 488 (sc-25285 AF488), Alexa Fluor® 546 (sc-25285 AF546), Alexa Fluor® 594 (sc-25285 AF594) or Alexa Fluor® 647 (sc-25285 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25285 AF680) or Alexa Fluor® 790 (sc-25285 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

PROTOCOLS

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

APPLICATIONS

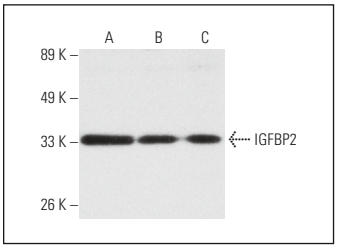
IGFBP2 (C-10) is recommended for detection of IGFBP2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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: T98G cell lysate: sc-2294, MES-SA/Dx5 cell lysate: sc-2284 or MIA PaCa-2 cell lysate: sc-2285.

DATA



IGFBP2 (C-10): sc-25285. Western blot analysis of IGFBP2 expression in T98G (**A**), MES-SA/Dx5 (**B**) and MIA PaCa-2 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Fukushima, T., et al. 2007. Silencing of Insulin-like growth factor-binding protein-2 in human glioblastoma cells reduces both invasiveness and expression of progression-associated gene CD24. J. Biol. Chem. 282: 18634-18644.
2. Li, Z., et al. 2012. Insulin stimulates IGFBP2 expression in 3T3-L1 adipocytes through the PI3K/mTOR pathway. Mol. Cell. Endocrinol. 358: 63-68.
3. Martino-Echarri, E., et al. 2014. Relevance of IGFBP2 proteolysis in glioma and contribution of the extracellular protease ADAMTS1. Oncotarget 5: 4295-4304.
4. Somri, L., et al. 2018. Differential expression of IGFBPs in Laron syndrome-derived lymphoblastoid cell lines: potential correlation with reduced cancer incidence. Growth Horm. IGF Res. 39: 6-12.
5. Greaney, A.M., et al. 2020. Platform effects on regeneration by pulmonary basal cells as evaluated by single-cell RNA sequencing. Cell Rep. 30: 4250-4265.e6.
6. Sun, L., et al. 2022. IGFBP2 drives regulatory T cell differentiation through Stat3/IDO signaling pathway in pancreatic cancer. J. Pers. Med. 12: 2005.

RESEARCH USE

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