SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP2 (G-4): sc-515134

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 bio-availability 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 (mouse) mapping to 1 C3.

SOURCE

IGFBP2 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 284-305 at the C-terminus of IGFBP2 of mouse 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 (G-4) is available conjugated to agarose (sc-515134 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515134 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515134 PE), fluorescein (sc-515134 FITC), Alexa Fluor® 488 (sc-515134 AF488), Alexa Fluor® 546 (sc-515134 AF546), Alexa Fluor® 594 (sc-515134 AF594) or Alexa Fluor® 647 (sc-515134 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515134 AF680) or Alexa Fluor® 790 (sc-515134 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515134 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

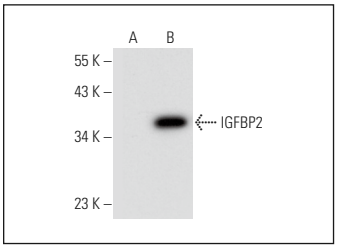
IGFBP2 (G-4) is recommended for detection of precursor and mature IGFBP2 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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 (m): sc-39586, IGFBP2 shRNA Plasmid (m): sc-39586-SH and IGFBP2 shRNA (m) Lentiviral Particles: sc-39586-V.

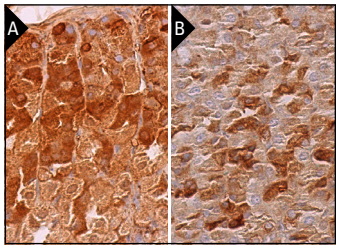
Molecular Weight of IGFBP2: 36 kDa.

Positive Controls: IGFBP2 (m): 293T Lysate: sc-120966.

DATA



IGFBP2 (G-4): sc-515134. Western blot analysis of IGFBP2 expression in non-transfected: sc-117752 (**A**) and mouse IGFBP2 transfected: sc-120966 (**B**) 293T whole cell lysates.



IGFBP2 (G-4): sc-515134. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse stomach (**A**) and rat stomach (**B**) tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Valadez-Bustos, N., et al. 2019. Oral administration of microencapsulated *B. Longum* BAA-999 and lycopene modulates IGF-1/IGF-1R/IGFBP3 protein expressions in a colorectal murine model. Int. J. Mol. Sci. 20: 4275.
2. Fajka-Boja, R., et al. 2020. Polyploid adipose stem cells shift the balance of IGF1/IGFBP2 to promote the growth of breast cancer. Front. Oncol. 10: 157.
3. Zhou, W., et al. 2024. A novel AML1-ETO/FTO positive feedback loop promotes leukemogenesis and Ara-C resistance via stabilizing IGFBP2 in t(8;21) acute myeloid leukemia. Exp. Hematol. Oncol. 13: 9.

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.