SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP2 (G-1): sc-365368

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.

REFERENCES

1. Lee, J., et al. 1994. Structure and localization of the IGFBP1 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.
3. Binoux, M. 1995. The IGF system in metabolism regulation. Diabetes Metabol. 21: 330-337.
4. Baxter, R.C. 1995. Insulin-like growth factor binding proteins as gluco-regulators. Metab. Clin. Exp. 44: 12-17.

CHROMOSOMAL LOCATION

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

SOURCE

IGFBP2 (G-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 313-328 at the C-terminus of IGFBP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365368 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

GFBP2 (G-1) is recommended for detection of precursor and mature IGFBP2 of human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

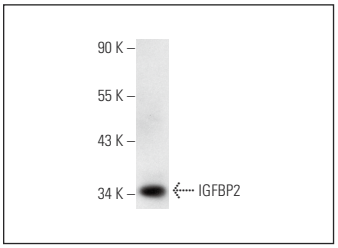
IGFBP2 (G-1) is also recommended for detection of precursor and mature IGFBP2 in additional species, including equine.

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 (G-1): sc-365368. Western blot analysis of IGFBP2 expression in T98G whole cell lysate.

SELECT PRODUCT CITATIONS

1. Jäger, W., et al. 2015. Patient-derived bladder cancer xenografts in the preclinical development of novel targeted therapies. Oncotarget 6: 21522-21532.
2. Dragano, N.R.V., et al. 2017. Polyunsaturated fatty acid receptors, GPR40 and GPR120, are expressed in the hypothalamus and control energy homeostasis and inflammation. J. Neuroinflammation 14: 91.
3. Ramalho, A.F., et al. 2018. Dietary fats promote functional and structural changes in the median eminence blood/spinal fluid interface-the protective role for BDNF. J. Neuroinflammation 15: 10.
4. Haddad-Tóvolli, R., et al. 2023. Maternal obesity damages the median eminence blood-brain barrier structure and function in the progeny: the beneficial impact of cross-fostering by lean mothers. Am. J. Physiol. Endocrinol. Metab. 324: E154-E166.

RESEARCH USE

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