SANTA CRUZ BIOTECHNOLOGY, INC.

IGFBP7 (H-3): sc-365293

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Insulin-like growth factor-binding proteins (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 been described, each differing in their tissue distribution, half-lives and modulation of IGF interactions with their receptors. IGFBP-7 is a secreted protein that 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: IGFBP7 (human) mapping to 4q12.

SOURCE

IGFBP7 (H-3) is a mouse monoclonal antibody raised against amino acids 181-282 of IGFBP7 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.

IGFBP7 (H-3) is available conjugated to agarose (sc-365293 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365293 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365293 PE), fluorescein (sc-365293 FITC), Alexa Fluor® 488 (sc-365293 AF488), Alexa Fluor® 546 (sc-365293 AF546), Alexa Fluor® 594 (sc-365293 AF594) or Alexa Fluor® 647 (sc-365293 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365293 AF680) or Alexa Fluor® 790 (sc-365293 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IGFBP7 (H-3) is recommended for detection of precursor and mature IGFBP7 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), 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).

IGFBP7 (H-3) is also recommended for detection of precursor and mature IGFBP7 in additional species, including equine and bovine.

Suitable for use as control antibody for IGFBP7 siRNA (h): sc-39593, IGFBP7 shRNA Plasmid (h): sc-39593-SH and IGFBP7 shRNA (h) Lentiviral Particles: sc-39593-V.

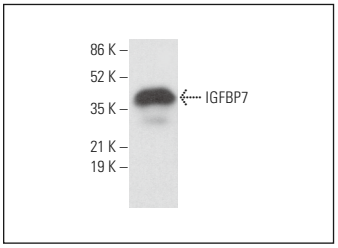
Molecular Weight of IGFBP7: 29 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224 or MIA PaCa-2 cell lysate: sc-2285.

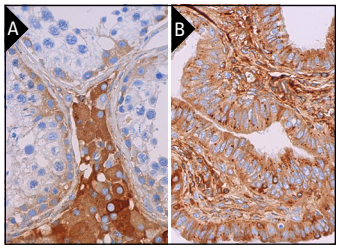
STORAGE

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

DATA



IGFBP7 (H-3): sc-365293. Western blot analysis of IGFBP7 expression in Caki-1 whole cell lysate. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



IGFBP7 (H-3): sc-365293. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Niklasson, M., et al. 2019. Mesenchymal transition and increased therapy resistance of glioblastoma cells is related to astrocyte reactivity. J. Pathol. 249: 295-307.
2. Yagi, H., et al. 2020. Discovery of novel biomarkers for atherosclerotic aortic aneurysm through proteomics-based assessment of disease progression. Sci. Rep. 10: 6429.
3. Napoletano, C., et al. 2020. Investigating patterns of immune interaction in ovarian cancer: probing the O-glycoproteome by the macrophage galactose-like C-type lectin (MGL). Cancers 12: 2841.
4. Wang, D., et al. 2022. Long non-coding RNA IGFBP7-AS1 accelerates the odontogenic differentiation of stem cells from human exfoliated deciduous teeth by regulating IGFBP7 expression. Hum. Cell 35: 1697-1707.
5. Lee, H.G., et al. 2022. Nanoscale biophysical properties of small extracellular vesicles from senescent cells using atomic force microscopy, surface potential microscopy, and Raman spectroscopy. Nanoscale Horiz. 7: 1488-1500.
6. Xia, Z.J., et al. 2022. COG4 mutation in Saul-Wilson syndrome selectively affects secretion of proteins involved in chondrogenesis in chondrocyte-like cells. Front. Cell Dev. Biol. 10: 979096.
7. Tshilenge, K.T., et al. 2023. Proteomic analysis of Huntington's disease medium spiny neurons identifies alterations in lipid droplets. Mol. Cell. Proteomics 22: 100534.
8. Siraj, Y., et al. 2024. IGFBP7 is a key component of the senescence-associated secretory phenotype (SASP) that induces senescence in healthy cells by modulating the insulin, IGF, and activin A pathways. Cell Commun. Signal. 22: 540.

RESEARCH USE

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