SANTA CRUZ BIOTECHNOLOGY, INC.

IGF2BP3 (D-7): sc-390639

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Insulin like growth factor 2 mRNA binding proteins (IGF2BPs) bind RNA and influence RNA synthesis and metabolism. IGF2BP1, also known as coding region determinant-binding protein/Insulin-like growth factor II mRNA-binding protein (CRD-BP), IMP1 or VICKZ1; IGF2BP2 (IMP2, VICKZ2, p62); and IGF2BP2 (IMP3, KOC1, VICKZ3) contain a unique combination of RNA recognition motifs and four hnRNP K homology domains. IGF2BP1 is abundant in embryonal tissues and is expressed in 81% of colon cancers, 73% of sarcomas and 58.5% of breast cancers. It recognizes c-Myc, IGF-II and t mRNAs, and H19 RNA, and plays a major role in proliferation of K-562 cells by an IGF-II-dependent mechanism. IGF2BP2 binds the 5' UTR of IGF-II mRNA and influences tumor cell growth, in which IGF2BP2 is associated with apoptosis induced by tretinoin. IGF2BP3 knockdown by RNA interference decreases levels of IGF-II protein without affecting IGF-II, c-Myc, or β Actin mRNA and H19 RNA levels. IGF2BP3 is a marker for carcinomas and high-grade dysplastic lesions of pancreatic ductal epithelium.

REFERENCES

1. Leeds, P., et al. 1997. Developmental regulation of CRD-BP, an RNA-binding protein that stabilizes c-Myc mRNA *in vitro*. Oncogene 14: 1279-1286.
2. Ioannidis, P., et al. 2001. c-Myc and IGF-II mRNA-binding protein (CRD-BP/IMP-1) in benign and malignant mesenchymal tumors. Int. J. Cancer 94: 480-484.
3. Ioannidis, P., et al. 2003. 8q24 Copy number gains and expression of the c-Myc mRNA stabilizing protein CRD-BP in primary breast carcinomas. Int. J. Cancer 104: 54-59.
4. Liao, B., et al. 2004. Targeted knockdown of the RNA-binding protein CRD-BP promotes cell proliferation via an Insulin-like growth factor II-dependent pathway in human K562 leukemia cells. J. Biol. Chem. 279: 48716-48724.

CHROMOSOMAL LOCATION

Genetic locus: IGF2BP3 (human) mapping to 7p15.3; Igf2bp3 (mouse) mapping to 6 B2.3.

SOURCE

IGF2BP3 (D-7) is a mouse monoclonal antibody raised against amino acids 377-413 mapping near the C-terminus of IGF2BP3 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.

IGF2BP3 (D-7) is available conjugated to agarose (sc-390639 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390639 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390639 PE), fluorescein (sc-390639 FITC), Alexa Fluor® 488 (sc-390639 AF488), Alexa Fluor® 546 (sc-390639 AF546), Alexa Fluor® 594 (sc-390639 AF594) or Alexa Fluor® 647 (sc-390639 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390639 AF680) or Alexa Fluor® 790 (sc-390639 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IGF2BP3 (D-7) is recommended for detection of IGF2BP3 of mouse, rat and 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).

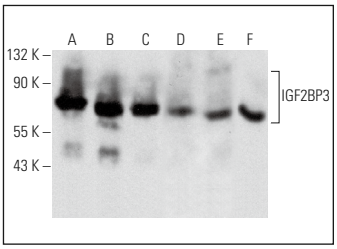
IGF2BP3 (D-7) is also recommended for detection of IGF2BP3 in additional species, including canine.

Suitable for use as control antibody for IMP-3 siRNA (h): sc-60846, IMP-3 siRNA (m): sc-60847, IMP-3 shRNA Plasmid (h): sc-60846-SH, IMP-3 shRNA Plasmid (m): sc-60847-SH, IMP-3 shRNA (h) Lentiviral Particles: sc-60846-V and IMP-3 shRNA (m) Lentiviral Particles: sc-60847-V.

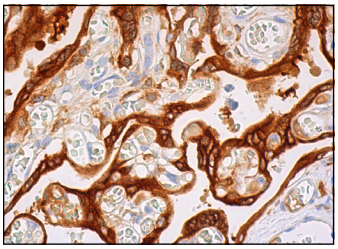
Molecular Weight of IGF2BP3: 69 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, PC-3 cell lysate: sc-2220 or HeLa whole cell lysate: sc-2200.

DATA



IGF2BP3 (D-7): sc-390639. Western blot analysis of IGF2BP3 expression in HeLa (**A**), HT-29 (**B**), PC-3 (**C**), NIH/3T3 (**D**), 3T3-L1 (**E**) and NRK (**F**) whole cell lysates.



IGF2BP3 (D-7): sc-390639. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and nuclear staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

1. Ennajdaoui, H., et al. 2016. IGF2BP3 modulates the interaction of invasion-associated transcripts with RISC. Cell Rep. 15: 1876-1883.
2. Li, M., et al. 2024. Transcriptional and epigenetic dysregulation impairs generation of proliferative neural stem and progenitor cells during brain aging. Nat. Aging 4: 62-79.

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.