

IGF2BP3 (G-9): sc-376067

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 IGF2BP3 (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 retinoin. 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 K-562 leukemia cells. *J. Biol. Chem.* 279: 48716-48724.
5. Ping, S., et al. 2005. Effect of all-*trans*-retinoic acid on mRNA binding protein p62 in human gastric cancer cells. *Int. J. Biochem. Cell Biol.* 37: 616-627.

CHROMOSOMAL LOCATION

Genetic locus: IGF2BP3 (human) mapping to 7p15.3.

SOURCE

IGF2BP3 (G-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 149-180 near the N-terminus of IGF2BP3 of human origin.

PRODUCT

Each vial contains 200 μ g 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-376067 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

IGF2BP3 (G-9) is recommended for detection of IGF2BP3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 IMP-3 siRNA (h): sc-60846, IMP-3 shRNA Plasmid (h): sc-60846-SH and IMP-3 shRNA (h) Lentiviral Particles: sc-60846-V.

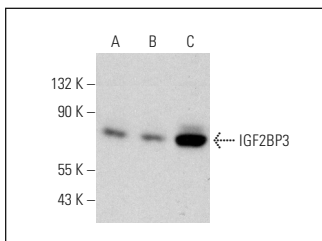
Molecular Weight of IGF2BP3: 69 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or IGF2BP3 (h): 293T Lysate: sc-117068.

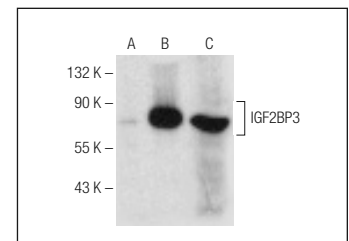
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IGF2BP3 (G-9): sc-376067. Western blot analysis of IGF2BP3 expression in HeLa (A), HT-29 (B) and NTERA-2 cl.D1 (C) whole cell lysates.



IGF2BP3 (G-9): sc-376067. Western blot analysis of IGF2BP3 expression in non-transfected 293T: sc-117068 (A), human IGF2BP3 transfected 293T: sc-117068 (B) and K-562 (C) whole cell lysates.

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.

PROTOCOLS

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