

IGF2BP1 (D-9): sc-166344

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 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.

CHROMOSOMAL LOCATION

Genetic locus: IGF2BP1 (human) mapping to 17q21.32; Igf2bp1 (mouse) mapping to 11 D.

SOURCE

IGF2BP1 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 324-367 within an internal region of IGF2BP1 of human origin.

PRODUCT

Each vial contains 200 μ g IgM 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-166344 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

IGF2BP1 (D-9) is recommended for detection of IGF2BP1 of mouse, rat and 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), 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 IGF2BP1 siRNA (h): sc-40694, IGF2BP1 siRNA (m): sc-40695, IGF2BP1 siRNA (r): sc-270306, IGF2BP1 shRNA Plasmid (h): sc-40694-SH, IGF2BP1 shRNA Plasmid (m): sc-40695-SH, IGF2BP1 shRNA Plasmid (r): sc-270306-SH, IGF2BP1 shRNA (h) Lentiviral Particles: sc-40694-V, IGF2BP1 shRNA (m) Lentiviral Particles: sc-40695-V and IGF2BP1 shRNA (r) Lentiviral Particles: sc-270306-V.

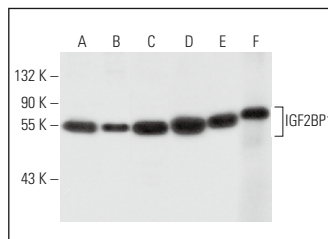
Molecular Weight of IGF2BP1: 63 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

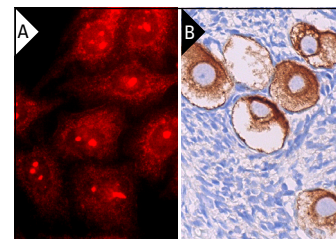
STORAGE

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

DATA



IGF2BP1 (D-9): sc-166344. Western blot analysis of IGF2BP1 expression in HEK293 (A), NIH/3T3 (B), K-562 (C), U-698-M (D) and Raji (E) whole cell lysates and mouse thymus tissue extract (F).



IGF2BP1 (D-9): sc-166344. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic and membrane staining of oocytes (B).

SELECT PRODUCT CITATIONS

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- Song, T., et al. 2015. Specific interaction of KIF11 with ZBP1 regulates the transport of β -Actin mRNA and cell motility. *J. Cell Sci.* 128: 1001-1010.
- Lottrup, G., et al. 2017. Comparison of global gene expression profiles of microdissected human foetal Leydig cells with their normal and hyperplastic adult equivalents. *Mol. Hum. Reprod.* 23: 339-354.
- Mackedenski, S., et al. 2018. Characterizing the interaction between Insulin-like growth factor 2 mRNA-binding protein 1 (IMP1) and KRAS expression. *Biochem. J.* 475: 2749-2767.
- 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.
- Yan, A., et al. 2020. MicroRNA-454-3p inhibits cell proliferation and invasion in esophageal cancer by targeting Insulin-like growth factor 2 mRNA-binding protein 1. *Oncol. Lett.* 20: 359.
- Wu, H., et al. 2020. A kinesin adapter directly mediates dendritic mRNA localization during neural development in mice. *J. Biol. Chem.* 295: 6605-6628.
- Wang, L., et al. 2022. m⁶A modification confers thermal vulnerability to HPV E7 oncotranscripts via reverse regulation of its reader protein IGF2BP1 upon heat stress. *Cell Rep.* 41: 111546.
- Yang, F., et al. 2023. Circ-CTNNB1 drives aerobic glycolysis and osteosarcoma progression via m⁶A modification through interacting with RBM15. *Cell Prolif.* 56: e13344.

RESEARCH USE

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