

IGF2BP3 (E-2): sc-365640

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.

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.

CHROMOSOMAL LOCATION

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

SOURCE

IGF2BP3 (E-2) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IGF2BP3 (E-2) is available conjugated to agarose (sc-365640 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365640 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365640 PE), fluorescein (sc-365640 FITC), Alexa Fluor[®] 488 (sc-365640 AF488), Alexa Fluor[®] 546 (sc-365640 AF546), Alexa Fluor[®] 594 (sc-365640 AF594) or Alexa Fluor[®] 647 (sc-365640 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365640 AF680) or Alexa Fluor[®] 790 (sc-365640 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365640 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

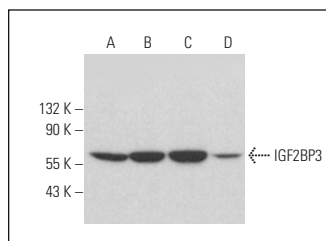
IGF2BP3 (E-2) is recommended for detection of IGF2BP3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 IGF2BP3 siRNA (h): sc-60846, IGF2BP3 shRNA Plasmid (h): sc-60846-SH and IGF2BP3 shRNA (h) Lentiviral Particles: sc-60846-V.

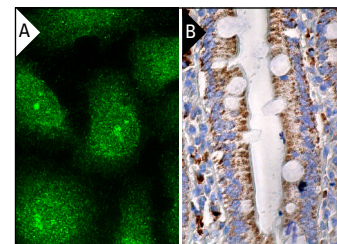
Molecular Weight of IGF2BP3: 69 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, RD whole cell lysate: sc-364791 or Caco-2 cell lysate: sc-2262.

DATA



IGF2BP3 (E-2): sc-365640. Western blot analysis of IGF2BP3 expression in HEL 92.1.7 (A), RD (B), Caco-2 (C) and TF-1 (D) whole cell lysates.



IGF2BP3 (E-2): sc-365640. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Schneider, T., et al. 2016. CircRNA-protein complexes: IMP3 protein component defines subfamily of circRNPs. *Sci. Rep.* 6: 31313.
2. Kim, H.Y., et al. 2018. IMP2 and IMP3 cooperate to promote the metastasis of triple-negative breast cancer through destabilization of progesterone receptor. *Cancer Lett.* 415: 30-39.
3. Masoud, R., et al. 2019. The complementary role of Insulin-like growth factor II mRNA-binding protein 3 (IMP3) in diagnosis of Hodgkin's lymphoma. *Ann. Diagn. Pathol.* 42: 64-68.
4. Yang, M., et al. 2020. Human Insulin growth factor 2 mRNA binding protein 2 increases miR-33a/b inhibition of liver ABCA1 expression and alters low-density apolipoprotein levels in mice. *Mol. Cell. Biol.* 40: e00058-20.
5. Gou, J., et al. 2022. Transfer of IGF2BP3 through Ara-C-induced apoptotic bodies promotes survival of recipient cells. *Front. Oncol.* 12: 801226.

STORAGE

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