

# FBP1 (6): sc-136137

## BACKGROUND

Activation of FUSE, the far-upstream element, is required for the proper expression of the mammalian gene *c-Myc* in undifferentiated cells. The binding of FBP (FUSE-binding protein or far-upstream element binding protein) to FUSE is necessary for *c-Myc* expression, indicating that FBP functions as a growth-dependent regulator of *c-Myc* expression. Isolated from proliferating HL-60 cells, FBP, FBP2 and FBP3 comprise a family of single-stranded DNA-binding proteins that specifically bind to FUSE elements. The FBP transcription factors share a conserved central DNA-binding domain and show significant homology in their carboxyl-terminal activation domains. Expression of FBP is detected in undifferentiated cells and is substantially decreased following cellular differentiation.

## REFERENCES

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- Duncan, R., et al. 1994. A sequence-specific, single strand binding protein activates the far-upstream of *c-Myc* and defines a new DNA-binding motif. *Genes Dev.* 8: 465-480.
- Bazar, L., et al. 1995. A transactivator of *c-Myc* is coordinately regulated with the proto-oncogene during cellular growth. *Oncogene* 10: 2229-2238.
- Davis-Smyth, T., et al. 1996. The far-upstream element-binding proteins comprise an ancient family of single-strand DNA-binding transactivators. *J. Biol. Chem.* 271: 31679-31687.
- Michelotti, G.A., et al. 1996. Multiple single-stranded cis elements are associated with activated chromatin of the human *c-Myc* gene *in vivo*. *Mol. Cell. Biol.* 16: 2656-2669.
- Rehbein, M., et al. 2002. Molecular characterization of MARTA1, a protein interacting with the dendritic targeting element of MAP2 mRNAs. *J. Neurochem.* 82: 1039-1046
- Braddock, D.T., et al. 2002. Structure and dynamics of KH domains from FBP bound to single-stranded DNA. *Nature* 415: 1051-1056

## CHROMOSOMAL LOCATION

Genetic locus: FUBP1 (human) mapping to 1p31.1; Fubp1 (mouse) mapping to 3 H3.

## SOURCE

FBP1 (6) is a mouse monoclonal antibody raised against amino acids 61-180 of FBP1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

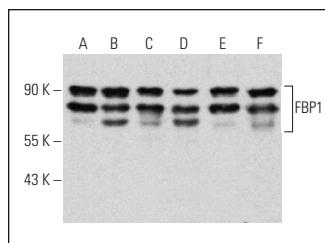
FBP1 (6) is recommended for detection of FBP1 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for FBP1 siRNA (h): sc-43760, FBP1 siRNA (m): sc-44829, FBP1 shRNA Plasmid (h): sc-43760-SH, FBP1 shRNA Plasmid (m): sc-44829-SH, FBP1 shRNA (h) Lentiviral Particles: sc-43760-V and FBP1 shRNA (m) Lentiviral Particles: sc-44829-V.

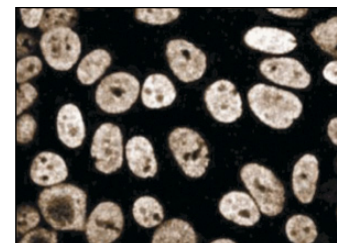
Molecular Weight of FBP1: 74 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or AML-193 whole cell lysate: sc-364182

## DATA



FBP1 (6): sc-136137. Western blot analysis of FBP1 expression in HeLa (A), HL-60 (B), Hep G2 (C) and NIH/3T3 (D) nuclear extracts and AML-193 (E) and RAT2 (F) whole cell lysates.



FBP1 (6): sc-136137. Immunofluorescence staining of HCT-8 cells showing nuclear staining.

## SELECT PRODUCT CITATIONS

- Li, H., et al. 2013. Far upstream element-binding protein 1 and RNA secondary structure both mediate second-step splicing repression. *Proc. Natl. Acad. Sci. USA* 110: E2687-E2695.
- Ding, Z., et al. 2015. Expression of far upstream element (FUSE) binding protein 1 in human glioma is correlated with *c-Myc* and cell proliferation. *Mol. Carcinog.* 54: 405-415.
- Zhang, J., et al. 2017. Knockdown of FUSE binding protein 1 enhances the sensitivity of epithelial ovarian cancer cells to carboplatin. *Oncol. Lett.* 14: 5819-5824.
- Qian, H., et al. 2018. PKG II effectively reversed EGF-induced protein expression alterations in human gastric cancer cell lines. *Cell Biol. Int.* 42: 435-442.
- Wang, P., et al. 2019. Icaritin suppresses cell cycle transition and cell migration in ovarian cancer cells. *Oncol. Rep.* E-published.

## RESEARCH USE

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