SANTA CRUZ BIOTECHNOLOGY, INC.

FBP1 (A-4): sc-393928

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 FBP1 (FUSE-binding protein or far upstream element-binding protein) to FUSE is necessary for c-Myc expression, indicating that FBP1 functions as a growth-dependent regulator of c-Myc expression. Isolated from proliferating HL-60 cells, FBP1 (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 FBP1 is detected in undifferentiated cells and is substantially decreased following cellular differentiation.

REFERENCES

1. Avigan, M.I., et al. 1990. A far upstream element stimulates c-Myc expression in undifferentiated leukemia cells. J. Biol. Chem. 265: 18538-18545.
2. Duncan, R., et al. 1994. A sequence-specific, single-strand binding protein activates the far upstream element of c-Myc and defines a new DNA-binding motif. Genes Dev. 8: 465-480.
3. Bazar, L., et al. 1995. A transactivator of c-Myc is coordinately regulated with the proto-oncogene during cellular growth. Oncogene 10: 2229-2238.
4. 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.
5. 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.
6. 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.
7. 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.

SOURCE

FBP1 (A-4) is a mouse monoclonal antibody raised against amino acids 65-106 mapping near the N-terminus of FBP1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-393928 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

FBP1 (A-4) is recommended for detection of FBP1 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FBP1 (A-4) is also recommended for detection of FBP1 in additional species, including equine, canine and bovine.

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

FBP1 (A-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

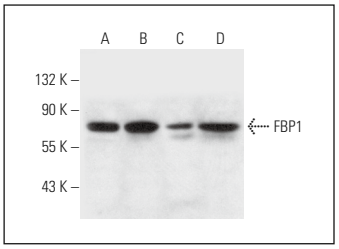
Molecular Weight of FBP1: 74 kDa.

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

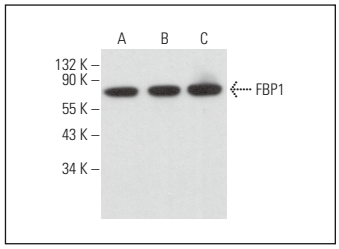
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



FBP1 (A-4): sc-393928. Western blot analysis of FBP1 expression in AML-193 (**A**), HL-60 (**B**), HeLa (**C**) and Hep G2 (**D**) whole cell lysates.



FBP1 (A-4): sc-393928. Western blot analysis of FBP1 expression in HL-60 (**A**), Jurkat (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Jo, A., et al. 2019. Deubiquitinase USP29 governs MYBBP1A in the brains of Parkinson's disease patients. J. Clin. Med. 9: 52.

RESEARCH USE

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