

FIR (E-6): sc-398799

BACKGROUND

Activation of FUSE, the far-upstream element, is required for the proper expression of the mammalian gene c-Myc. The binding of FBP (FUSE-binding protein) to FUSE is necessary for c-Myc expression. The FBP interacting repressor, FIR, binds to the central DNA-binding domain of FBP and can serve as an overriding negative regulator of c-Myc promoter activity. FIR interacts with the TFIH complex, which is a multifunctional, multisubunit RNA polymerase II transcription factor that interacts with several DNA-binding transactivators. FIR blocks activator-dependent, but not basal transcription through TFIH. FIR shares identity with seven in absentia (sia) binding protein 1. FIR is expressed in spleen, thymus, prostate, small intestine, colon, and peripheral blood leukocytes, and with relatively higher levels of expression in testis and ovary.

REFERENCES

- Avigan, M.I., et al. 1990. A far upstream element stimulates c-Myc expression in undifferentiated leukemia cells. *J. Biol. Chem.* 265: 18538-18545.
- Duncan, R.D., 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.
- Frit, P., et al. 1999. Transcription factor IIH: a key player in the cellular response to DNA damage. *Biochimie* 81: 27-38.
- Haile, D.T. and Parvin, J.D. 1999. Activation of transcription *in vitro* by the BRCA1 carboxyl-terminal domain. *J. Biol. Chem.* 274: 2113-2117.
- Liu, J., et al. 2000. The FBP interacting repressor targets TFIH to inhibit activated transcription. *Mol. Cell* 5: 331-341.

CHROMOSOMAL LOCATION

Genetic locus: PUF60 (human) mapping to 8q24.3; Puf60 (mouse) mapping to 15 D3.

SOURCE

FIR (E-6) is a mouse monoclonal antibody raised against amino acids 260-559 mapping at the C-terminus of FIR of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FIR (E-6) is available conjugated to agarose (sc-398799 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398799 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398799 PE), fluorescein (sc-398799 FITC), Alexa Fluor® 488 (sc-398799 AF488), Alexa Fluor® 546 (sc-398799 AF546), Alexa Fluor® 594 (sc-398799 AF594) or Alexa Fluor® 647 (sc-398799 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398799 AF680) or Alexa Fluor® 790 (sc-398799 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FIR (E-6) is recommended for detection of FIR of mouse, rat and 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).

Suitable for use as control antibody for FIR siRNA (h): sc-105353, FIR siRNA (m): sc-145186, FIR shRNA Plasmid (h): sc-105353-SH, FIR shRNA Plasmid (m): sc-145186-SH, FIR shRNA (h) Lentiviral Particles: sc-105353-V and FIR shRNA (m) Lentiviral Particles: sc-145186-V.

Molecular Weight of FIR: 60 kDa.

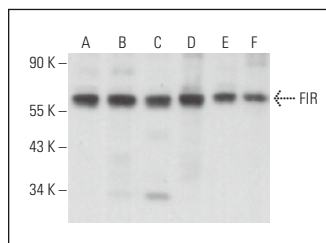
Positive Controls: HeLa whole cell lysate: sc-2200, SW480 cell lysate: sc-2219 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SUPPORT REAGENTS

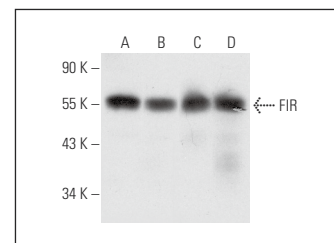
To ensure optimal results, the following support reagents are recommended:

- 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



FIR (E-6): sc-398799. Western blot analysis of FIR expression in HeLa (A), SW480 (B), Hep G2 (C), MOLT-4 (D), MCF7 (E) and Neuro-2A (F) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



FIR (E-6): sc-398799. Western blot analysis of FIR expression in HeLa (A), SW480 (B), Hep G2 (C) and MOLT-4 (D) 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.

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