**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 **TFIIH 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 **TFIIH**. **FIR** shares identity with seven in absentia (siah) 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**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

**FIR (B-5)** 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 IgG2b kappa light chain 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 SDS required.

**APPLICATIONS**

**FIR (B-5)** 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, RD whole cell lysate: sc-364791 or MCF7 whole cell lysate: sc-2206.

**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, TBS Blotto A Blocking Reagent: sc-2333 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 (B-5)**: sc-398785. Western blot analysis of **FIR** expression in HeLa (A), RD (B), MCF7 (C) and Neuro-2A (D) whole cell lysates and rat testis tissue extract (E).

**RESEARCH USE**

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

**PROTOCOLS**

See our website at www.scbt.com for detailed protocols and support products.