

# E4BP4 (F-1): sc-74414

## BACKGROUND

E4BP4, also known as NFIL3, functions as a transcriptional repressor and is a member of the basic leucine zipper (bZIP) transcription factor family. E4BP4 binds with high specificity to the E4 ATF, which is a DNA sequence traditionally targeted by the ATF/CREB family of transcription factors. A 65 amino acid segment located in the carboxy-terminus of E4BP4 interacts specifically with the TBP binding protein Dr1. In the suprachiasmatic nucleus, circadian center and liver, E4BP4 competes with PAR proteins for DNA binding via a reciprocating mechanism. The phase expression of E4BP4 correlates with the circadian cycle and represses transcription of genes otherwise activated by PAR transcription regulators. E4BP4 also plays an important role in an IL-3-mediated signaling pathway that is responsible for the survival of B cell progenitors. The gene encoding human E4BP4 maps to chromosome 9q22.31.

## REFERENCES

1. Cowell, I.G., et al. 1992. Transcriptional repression by a novel member of the bZIP family of transcription factors. *Mol. Cell. Biol.* 12: 3070-3077.
2. Cowell, I.G., et al. 1994. Transcriptional repression by the human bZIP factor E4BP4: definition of a minimal repression domain. *Nucleic Acids Res.* 22: 59-65.
3. Cowell, I.G., et al. 1996. Protein-protein interaction between the transcriptional repressor E4BP4 and the TBP-binding protein Dr1. *Nucleic Acids Res.* 24: 3607-3613.
4. Ikushima, S., et al. 1997. Pivotal role for the NFIL3/E4BP4 transcription factor in interleukin-3-mediated survival of pro-B lymphocytes. *Proc. Natl. Acad. Sci. USA* 94: 2609-2614.
5. Blair, I.P., et al. 1998. A YAC-based transcript map of human chromosome 9q22.1-q22.3 encompassing the loci for hereditary sensory neuropathy type I and multiple self-healing squamous epithelioma. *Genomics* 51: 277-281.
6. Mitsui, S., et al. 2001. Antagonistic role of E4BP4 and PAR proteins in the circadian oscillatory mechanism. *Genes Dev.* 15: 995-1006.

## CHROMOSOMAL LOCATION

Genetic locus: NFIL3 (human) mapping to 9q22.31.

## SOURCE

E4BP4 (F-1) is a mouse monoclonal antibody raised against amino acids 163-462 mapping at the C-terminus of E4BP4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> 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-74414 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

E4BP4 (F-1) is recommended for detection of E4BP4 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).

Suitable for use as control antibody for E4BP4 siRNA (h): sc-37821, E4BP4 shRNA Plasmid (h): sc-37821-SH and E4BP4 shRNA (h) Lentiviral Particles: sc-37821-V.

E4BP4 (F-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

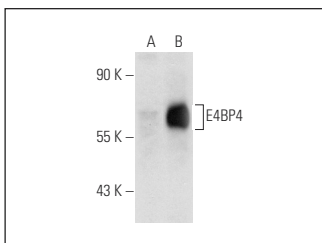
Molecular Weight of E4BP4: 60 kDa.

Positive Controls: E4BP4 (h): 293 Lysate: sc-110510, Ramos cell lysate: sc-2216 or PCEP-4 whole cell lysate.

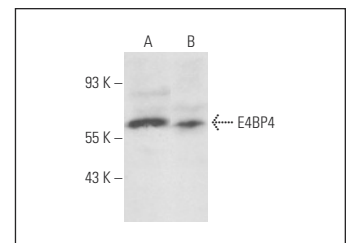
## RECOMMENDED SUPPORT REAGENTS

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



E4BP4 (F-1): sc-74414. Western blot analysis of E4BP4 expression in non-transfected: sc-110760 (A) and human E4BP4 transfected: sc-110510 (B) 293 whole cell lysates.



E4BP4 (F-1): sc-74414. Western blot analysis of E4BP4 expression in Ramos (A) and PCEP-4 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Tong, X., et al. 2016. E4BP4 is an insulin-induced stabilizer of nuclear SREBP-1c and promotes SREBP-1c-mediated lipogenesis. *J. Lipid Res.* 57: 1219-1230.

## RESEARCH USE

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