

E4BP4 (h): 293 Lysate: sc-110510

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., Skinner, A. and Hurst, H.C. 1992. Transcriptional repression by a novel member of the bZIP family of transcription factors. *Mol. Cell Biol.* 12: 3070-3077.
2. Cowell, I.G. and Hurst, H.C. 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. and Hurst, H.C. 1996. Protein-protein interaction between the transcriptional repressor E4BP4 and the TBP-binding protein DR1. *Nucleic Acids Res.* 24: 3607-3613.
4. Ikushima, S., Inukai, T., Inaba, T., Nimer, S.D., Cleveland, J.L. and Look, A.T. 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., Hulme, D., Dawkins, J.L. and Nicholson, G.A. 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., Yamaguchi, S., Matsuo, T., Ishida, Y. and Okamura, H. 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.

PRODUCT

E4BP4 (h): 293 Lysate represents a lysate of human E4BP4 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

E4BP4 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive E4BP4 antibodies. Recommended use: 10-20 µl per lane.

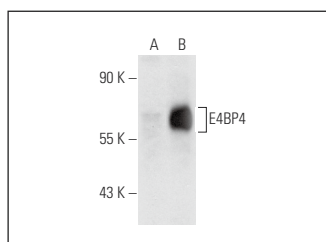
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

E4BP4 (F-1): sc-74414 is recommended as a positive control antibody for Western Blot analysis of enhanced human E4BP4 expression in E4BP4 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

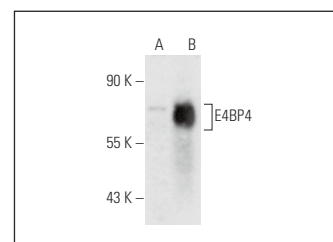
RECOMMENDED SUPPORT REAGENTS

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.

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 (B-1): sc-137163. Western blot analysis of E4BP4 expression in non-transfected: sc-110760 (A) and human E4BP4 transfected: sc-110510 (B) 293 whole cell lysates.

PROTOCOLS

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