

E4BP4 (C-18): sc-9550

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.

CHROMOSOMAL LOCATION

Genetic locus: NFIL3 (human) mapping to 9q22.31; Nfil3 (mouse) mapping to 13 B1.

SOURCE

E4BP4 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of E4BP4 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-9550 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-9550 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

E4BP4 (C-18) is recommended for detection of E4BP4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

E4BP4 (C-18) is also recommended for detection of E4BP4 in additional species, including canine and bovine.

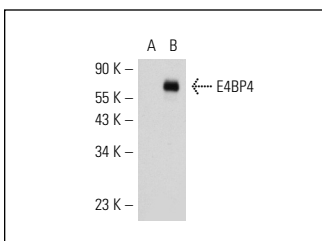
Suitable for use as control antibody for E4BP4 siRNA (h): sc-37821, E4BP4 siRNA (m): sc-37822, E4BP4 shRNA Plasmid (h): sc-37821-SH, E4BP4 shRNA Plasmid (m): sc-37822-SH, E4BP4 shRNA (h) Lentiviral Particles: sc-37821-V and E4BP4 shRNA (m) Lentiviral Particles: sc-37822-V.

E4BP4 (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

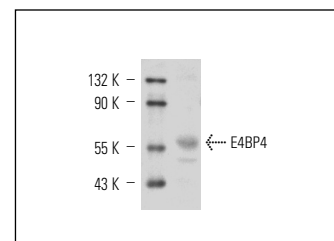
Molecular Weight of E4BP4: 60 kDa.

Positive Controls: E4BP4 (h): 293 Lysate: sc-110510, rat liver extract: sc-2395 or Ramos cell lysate: sc-2216.

DATA



E4BP4 (C-18): sc-9550. Western blot analysis of E4BP4 expression in non-transfected: sc-110760 (A) and human E4BP4 transfected: sc-110510 (B) 293 whole cell lysates.



E4BP4 (C-18): sc-9550. Western blot analysis of E4BP4 expression in Ramos whole cell lysate.

SELECT PRODUCT CITATIONS

1. Klick, D.E., et al. 2007. Mechanisms regulating human FMO3 transcription. *Drug Metab. Rev.* 39: 419-442.
2. Beach, J.A., et al. 2011. E4BP4 facilitates glucocorticoid-evoked apoptosis of human leukemic CEM cells via upregulation of Bim. *J. Mol. Signal.* 6: 13.
3. Pellicelli, M., et al. 2012. PTHrP(1-34)-mediated repression of the PHEX gene in osteoblastic cells involves the transcriptional repressor E4BP4. *J. Cell. Physiol.* 227: 2378-2387.

MONOS
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Try **E4BP4 (A-9): sc-74415** or **E4BP4 (C-6): sc-374451**, our highly recommended monoclonal alternatives to E4BP4 (C-18).