SANTA CRUZ BIOTECHNOLOGY, INC.

# E4BP4 (E-16): sc-9551

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

## 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.

## 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 surival 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.


## CHROMOSOMAL LOCATION

Genetic locus: Nfil3 (mouse) mapping to 13 B1.

## SOURCE

E4BP4 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of E4BP4 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9551 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9551 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 (E-16) is recommended for detection of E4BP4 of mouse and rat 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).

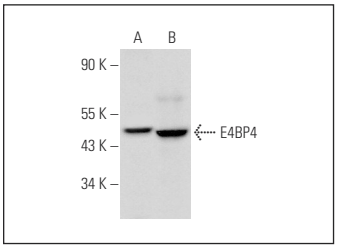
Suitable for use as control antibody for E4BP4 siRNA (m): sc-37822, E4BP4 shRNA Plasmid (m): sc-37822-SH and E4BP4 shRNA (m) Lentiviral Particles: sc-37822-V.

E4BP4 (E-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of E4BP4: 60 kDa.

Positive Controls: rat testis extract: sc-2400, rat adrenal gland extract: sc-364802 or rat liver extract: sc-2395.

## DATA




E4BP4 (E-16): sc-9551. Western blot analysis of E4BP4 expression in rat testis (**A**) and rat adrenal gland (**B**) tissue extracts.

## SELECT PRODUCT CITATIONS


1. Ohno, T., et al. 2007. The negative transcription factor E4BP4 is associated with circadian clock protein PERIOD2. Biochem. Biophys. Res. Commun. 354: 1010-1015.


## RESEARCH USE

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

## PROTOCOLS

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