SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP α (m2): 293T Lysate: sc-126523

BACKGROUND

The transcription factor C/EBP α (CCAAT-enhancer binding protein) is a heat-stable, sequence-specific DNA-binding protein that binds avidly to several different *cis*-regulatory DNA sequences commonly associated with viral and cellular genes transcribed by RNA polymerase II. C/EBP α regulates gene expression in a variety of tissues including liver, adipose, lung and intestine. C/EBP α is a basic region/leucine zipper transcription factor selectively expressed during the differentiation of liver, adipose tissue, blood cells and the endocrine pancreas. C/EBP α uses a bipartite structural motif to bind DNA and appears to function exclusively in terminally differentiated, growth-arrested cells. In the liver, C/EBP α is a transactivator of several genes, which are regulated by growth hormone. Growth hormone enhances not only the levels of C/EBP α mRNA and protein, but also the DNA-binding activity of C/EBP α. C/EBP α functions as an important transcription factor that regulates different genes, including prolactin gene expression.

REFERENCES

1. Johnson, P.F., et al. 1987. Identification of a rat liver nuclear protein that binds to the enhancer core element of three animal viruses. Genes Dev. 1: 133-146.
2. Landschulz, W.H., et al. 1988. Isolation of a recombinant copy of the gene encoding C/EBP. Genes Dev. 2: 786-800.
3. Birkenmeier, E.H., et al. 1989. Tissue-specific expression, developmental regulation, and genetic mapping of the gene encoding CCAAT/enhancer binding protein. Genes Dev. 3: 1146-1156.
4. Cao, Z., et al. 1991. Regulated expression of three C/EBP isoforms during adipose conversion of 3T3-L1 cells. Genes Dev. 5: 1538-1552.
5. Rana, B., et al. 1995. The DNA-binding activity of C/EBP transcription factor is regulated in the G_1 phase of the hepatocyte cell cycle. J. Biol. Chem. 270: 18123-18132.
6. Maytin, E.V., et al. 1998. Transcription factors C/EBP α, C/EBP β, and CHOP (Gadd153) expressed during the differentiation program of keratinocytes *in vitro* and *in vivo*. J. Invest. Dermatol. 110: 238-246.
7. Yiangou, M., et al. 1998. Induction of a subgroup of acute phase protein genes in mouse liver by hyperthermia. Biochim. Biophys. Acta 1396: 191-206.
8. Jacob, K.K., et al. 1999. CCAAT/enhancer-binding protein α is a physiological regulator of prolactin gene expression. Endocrinology 140: 4542-4550.
9. Strand, P., et al. 2000. Growth hormone induces CCAAT/enhancer binding protein α (C/EBP α) in cultured rat hepatocytes. J. Hepatol. 32: 618-626.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Cebpa (mouse) mapping to 7 B1.

PRODUCT

C/EBP α (m2): 293T Lysate represents a lysate of mouse C/EBP α transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

C/EBP α (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive C/EBP α antibodies. Recommended use: 10-20 µl per lane.

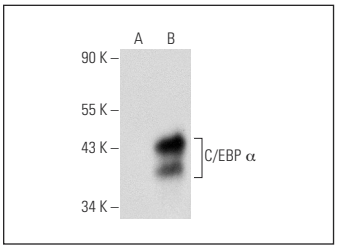
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

C/EBP α (G-10): sc-166258 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse C/EBP α expression in C/EBP α transfected 293T 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



C/EBP α (G-10): sc-166258. Western blot analysis of C/EBP α expression in non-transfected: sc-117752 (**A**) and mouse C/EBP α transfected: sc-126523 (**B**) 293T whole cell lysates.

RESEARCH USE

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