

# C/EBP $\alpha$ (N-19): sc-9315

## BACKGROUND

The transcription factor, C/EBP  $\alpha$  (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 gene transcribed by RNA polymerase II. C/EBP  $\alpha$  regulates gene expression in a variety of tissues including liver, adipose, lung and intestine. C/EBP  $\alpha$  (42 and 30 kDa forms) 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  $\alpha$  uses a bipartite structural motif to bind DNA and appears to function exclusively in terminally differentiated, growth-arrested cells. In the liver, C/EBP  $\alpha$  is a transactivator of several genes, which are regulated by growth hormone. Growth hormone enhances not only the levels of C/EBP  $\alpha$  mRNA and protein, but also the DNA binding activity of C/EBP  $\alpha$ . C/EBP  $\alpha$  functions as an important transcription factor that regulates different genes, including prolactin gene expression.

## CHROMOSOMAL LOCATION

Genetic locus: CEBPA (human) mapping to 19q13.11; Cebpa (mouse) mapping to 7 B1.

## SOURCE

C/EBP  $\alpha$  (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of C/EBP  $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9315 P, (100  $\mu$ g 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-9315 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

C/EBP  $\alpha$  (N-19) is recommended for detection of C/EBP  $\alpha$  p42 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

C/EBP  $\alpha$  (N-19) is also recommended for detection of C/EBP  $\alpha$  p42 in additional species, including bovine and porcine.

Suitable for use as control antibody for C/EBP  $\alpha$  siRNA (h): sc-37047, C/EBP  $\alpha$  siRNA (m): sc-37048, C/EBP  $\alpha$  shRNA Plasmid (h): sc-37047-SH, C/EBP  $\alpha$  shRNA Plasmid (m): sc-37048-SH, C/EBP  $\alpha$  shRNA (h) Lentiviral Particles: sc-37047-V and C/EBP  $\alpha$  shRNA (m) Lentiviral Particles: sc-37048-V.

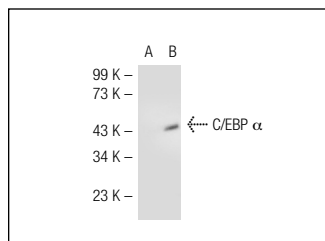
C/EBP  $\alpha$  (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of C/EBP  $\alpha$  isoforms: 42/30 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



C/EBP  $\alpha$  (N-19): sc-9315. Western blot analysis of C/EBP  $\alpha$  expression in non-transfected 293T: sc-117752 (A), mouse C/EBP  $\alpha$  transfected: sc-126523 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Gervois, P., et al. 2004. Global suppression of IL-6-induced acute phase response gene expression after chronic *in vivo* treatment with the peroxisome proliferator-activated receptor- $\alpha$  activator fenofibrate. *J. Biol. Chem.* 279: 16154-16160.
- Parrella, E., et al. 2004. Phosphodiesterase IV inhibition by piclamilast potentiates the cytodifferentiating action of retinoids in myeloid leukemia cells. Cross-talk between the cAMP and the retinoic acid signaling pathways. *J. Biol. Chem.* 279: 42026-42040.
- Liu, Y.N., et al. 2004. Transcriptional regulation of human osteopontin promoter by C/EBP $\alpha$  and AML-1 in metastatic cancer cells. *Oncogene* 23: 278-288.
- Wang, G.L., et al. 2004. Liver tumors escape negative control of proliferation via PI3K/Akt-mediated block of C/EBP alpha growth inhibitory activity. *Genes Dev.* 18: 912-925.
- Lii, C.K., et al. 2012. Diallyl trisulfide suppresses the adipogenesis of 3T3-L1 preadipocytes through ERK activation. *Food Chem. Toxicol.* 50: 478-484.
- Lee, S.H., et al. 2012. Capsaicin represses transcriptional activity of  $\beta$ -catenin in human colorectal cancer cells. *J. Nutr. Biochem.* 23: 646-655.

## RESEARCH USE

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


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Try **C/EBP  $\alpha$  (D-5): sc-365318** or **C/EBP  $\alpha$  (G-10): sc-166258**, our highly recommended monoclonal alternatives to C/EBP  $\alpha$  (N-19).