SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP α (C-18): sc-9314

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 celular gene 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 (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 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.

CHROMOSOMAL LOCATION

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

SOURCE

C/EBP α (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of C/EBP α 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.

Blocking peptide available for competition studies, sc-9314 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-9314 X, 200 µg/0.1 ml.

APPLICATIONS

C/EBP α (C-18) is recommended for detection of C/EBP α p42 of mouse, rat, human, *Xenopus* laevis and zebrafish 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).

C/EBP α (C-18) is also recommended for detection of C/EBP α p42 in additional species, including bovine, porcine and avian.

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

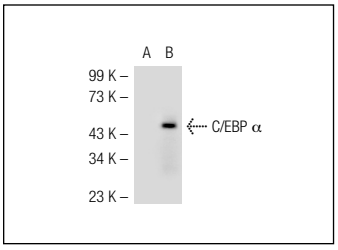
C/EBP α (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of C/EBP α isoforms: 42/30 kDa.

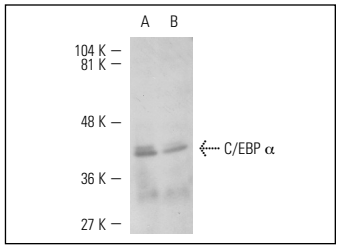
STORAGE

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

DATA



C/EBP α (C-18): sc-9314. Western blot analysis of C/EBP α expression in non-transfected 293T: sc-117752 (**A**), mouse C/EBP α transfected: sc-126523 (**B**) 293T whole cell lysates.



C/EBP α (C-18): sc-9314. Western blot analysis of C/EBP α expression in rat liver (**A**) and mouse liver (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Wu, F.Y., et al. 2002. Lytic replication-associated protein (RAP) encoded by Kaposi sarcoma-associated herpesvirus causes p21(CIP-1)-mediated G_1 cell cycle arrest through CCAAT/enhancer-binding protein-α. Proc. Natl. Acad. Sci. USA 99: 10683-10688.
2. Jin, H.O., et al. 2009. Activating transcription factor 4 and CCAAT/enhancer-binding protein-β negatively regulate the mammalian target of rapamycin via Redd1 expression in response to oxidative and endoplasmic reticulum stress. Free Radic. Biol. Med. 46: 1158-1167.
3. Bristol, J.A., et al. 2009. CCAAT/enhancer binding proteins α and β regulate the tumor necrosis factor receptor 1 gene promoter. Mol. Immunol. 46: 2706-2713.
4. Fu, C.T., et al. 2010. An evolutionarily conserved PTEN-C/EBPα-CTNNA1 axis controls myeloid development and transformation. Blood 115: 4715-4724.
5. Aguilar-Morante, D., et al. 2011. Decreased CCAAT/enhancer binding protein β expression inhibits the growth of glioblastoma cells. Neuroscience 176: 110-119.
6. Shen, S.M., et al. 2011. Apoptosis-inducing factor is a target gene of C/EBPα and participates in adipocyte differentiation. FEBS Lett. 585: 2307-2312.

RESEARCH USE

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