SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP α (G-10): sc-166258

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

C/EBP α (G-10) is a mouse monoclonal antibody raised against a peptide mapping at the C-terminus of C/EBP α of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain 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-166258 X, 200 µg/0.1 ml.

C/EBP α (G-10) is available conjugated to agarose (sc-166258 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166258 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166258 PE), fluorescein (sc-166258 FITC), Alexa Fluor® 488 (sc-166258 AF488), Alexa Fluor® 546 (sc-166258 AF546), Alexa Fluor® 594 (sc-166258 AF594) or Alexa Fluor® 647 (sc-166258 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166258 AF680) or Alexa Fluor® 790 (sc-166258 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

C/EBP α (G-10) is recommended for detection of C/EBP α p42 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

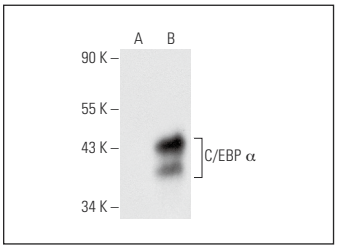
Suitable for use as control antibody for C/EBP α siRNA (h): sc-37047, C/EBP α siRNA (m): sc-37048, C/EBP α shRNA Plasmid (h): sc-37047-SH, C/EBP α shRNA Plasmid (m): sc-37048-SH, C/EBP α shRNA (h) Lentiviral Particles: sc-37047-V and C/EBP α shRNA (m) Lentiviral Particles: sc-37048-V.

C/EBP α (G-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

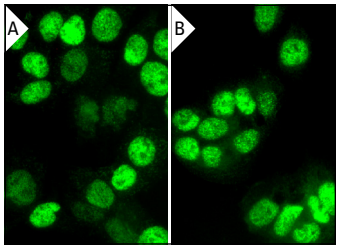
Molecular Weight of C/EBP α isoforms: 42/30 kDa.

Positive Controls: C/EBP α (m2): 293T Lysate: sc-126523.

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.



C/EBP α (G-10): sc-166258. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**,**B**).

SELECT PRODUCT CITATIONS

1. Ng, K.P., et al. 2011. P53 independent epigenetic-differentiation treatment in xenotransplant models of acute myeloid leukemia. Leukemia 25: 1739-1750.
2. Cha, J.Y., et al. 2018. *Chrysanthemum indicum L.* ethanol extract reduces high-fat diet-induced obesity in mice. Exp. Ther. Med. 15: 5070-5076.
3. von Gamm, M., et al. 2019. Immune homeostasis and regulation of the interferon pathway require myeloid-derived regnase-3. J. Exp. Med. 216: 1700-1723.
4. Mbondji-Wonje, C., et al. 2020. Genetic variability of the U5 and down-stream sequence of major HIV-1 subtypes and circulating recombinant forms. Sci. Rep. 10: 13214.
5. Takao, S., et al. 2021. Convergent organization of aberrant MYB complex controls oncogenic gene expression in acute myeloid leukemia. Elife 10: e65905.

RESEARCH USE

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