

C/EBP α (G-10): sc-166258

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 μ g 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 μ g/0.1 ml.

C/EBP α (G-10) is available conjugated to agarose (sc-166258 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166258 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

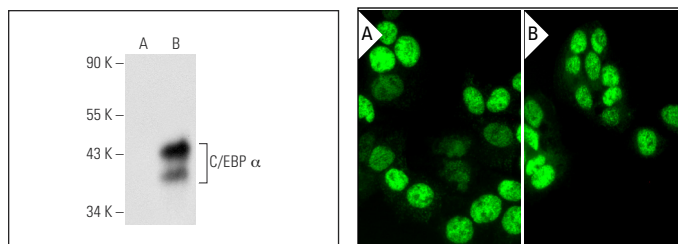
C/EBP α (G-10) is recommended for detection of C/EBP α p42 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

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. Sun, X., et al. 2016. Suppression of the SWI/SNF component Arid1a promotes mammalian regeneration. *Cell Stem Cell* 18: 456-466.
3. 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.
4. 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.
5. Mbondji-Wonje, C., et al. 2020. Genetic variability of the U5 and downstream sequence of major HIV-1 subtypes and circulating recombinant forms. *Sci. Rep.* 10: 13214.
6. 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.