SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP γ (H-50): sc-25769

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 first purified from rat liver nuclei 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 uses a bipartite structural motif to bind DNA. Two protein chains dimerize through a set of amphipathic α helices termed the leucine zipper. Highly basic polypeptide regions emerge from the zipper to form a linked set of DNA contact surfaces. C/EBP α appears to function exclusively in terminally differentiated, growth-arrested cells. Additional family members include C/EBP β, C/EBP γ, C/EBP δ and C/EBP ε, all of which exhibit similar DNA-binding specificities and affinities to C/EBP α. Furthermore, C/EBP β and C/EBP δ readily form heterodimers both with each other as well as with C/EBP α.

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. Umek, R.M., et al. 1991. CCAAT-enhancer binding protein: a component of a differentiation switch. Science 251: 288-292.
6. Williams, S.C., et al. 1991. A family of C/EBP-related proteins capable of forming covalently linked leucine zipper dimers *in vitro*. Genes Dev. 5: 1553-1567.

CHROMOSOMAL LOCATION

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

SOURCE

C/EBP γ (H-50) is a rabbit polyclonal antibody raised against amino acids 71-120 mapping to an internal region of C/EBP γ 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25769 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

C/EBP γ (H-50) is recommended for detection of C/EBP γ of mouse, rat and human 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 γ (H-50) s also recommended for detection of C/EBP γ in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for C/EBP γ siRNA (h): sc-37720, C/EBP γ siRNA (m): sc-37721, C/EBP γ shRNA Plasmid (h): sc-37720-SH, C/EBP γ shRNA Plasmid (m): sc-37721-SH, C/EBP γ shRNA (h) Lentiviral Particles: sc-37720-V and C/EBP γ shRNA (m) Lentiviral Particles: sc-37721-V.

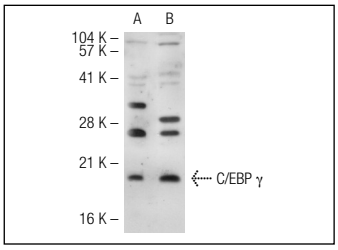
C/EBP γ (H-50) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of C/EBP γ: 16 kDa.

Molecular Weight (observed) of C/EBP γ: 19 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

DATA



C/EBP γ (H-50): sc-25769. Western blot analysis of C/EBP γ expression in Jurkat (**A**) and HeLa (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Granger, R.L., et al. 2000. Stimulus- and cell-type-specific regulation of CCAAT-enhancer binding protein isoforms in glomerular mesangial cells by lipopolysaccharide and cytokines. Biochim. Biophys. Acta 1501: 171-179.
2. Wei, W., et al. 2006. Degradation of C/EBPβ in cultured myotubes is calpain-dependent. J. Cell. Physiol. 208: 386-398.
3. Hattori, H., et al. 2007. Identification of a responsible promoter region and a key transcription factor, CCAAT/enhancer-binding protein ε, for up-regulation of PHGPx in HL60 cells stimulated with TNF α. Biochem. J. 408: 277-286.

STORAGE

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