SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP γ (C-20): sc-7658

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.

CHROMOSOMAL LOCATION

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

SOURCE

C/EBP γ (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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.

Blocking peptide available for competition studies, sc-7658 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-7658 X, 200 µg/0.1 ml.

APPLICATIONS

C/EBP γ (C-20) 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), 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 (C-20) is also recommended for detection of C/EBP γ in additional species, including equine, canine, bovine and porcine.

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 (C-20) 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.

SELECT PRODUCT CITATIONS

1. Harris, V.K., et al. 2000. Induction of the angiogenic modulator fibroblast growth factor-binding protein by epidermal growth factor is medicated through both MEK/ERk and p38 signal tranduction pathways. J. Biol. Chem. 275: 10802-10811.
2. Schwartz, C., et al. 2000. Functional interactions between C/EBP, Sp1, and COUP-TF regulate human immunodeficiency virus type 1 gene transcription in human brain cells. J. Virol. 74: 65-73.
3. Baccam, M., et al. 2003. CD40-mediated transcriptional regulation of the IL-6 gene in B lymphocytes: involvement of NFκB, AP-1, and C/EBP. J. Immunol. 170: 3099-3108.
4. Pocock, J., et al. 2003. Differential activation of NFκB, AP-1, and C/EBP in endotoxin-tolerant rats: mechanisms for *in vivo* regulation of glomerular RANTES/CCL5 expression. J. Immunol. 170: 6280-6291.
5. Soloff, M.S., et al. 2004. *In situ* analysis of interleukin-1-induced transcription of Cox-2 and IL-8 in cultured human myometrial cells. Endocrinol. 145: 1248-1254.
6. Takeshita, F., et al. 2004. Transcriptional regulation of the human TLR9 gene. J. Immunol. 173: 2552-2561.
7. Ear, T., et al. 2008. Cytokine generation, promoter activation, and oxidant-independent NFκB activation in a transfectable human neutrophilic cellular model. BMC Immunol. 9: 14.
8. Cloutier, A., et al. 2009. Inflammatory cytokine production by human neutrophils involves C/EBP transcription factors. J. Immunol. 182: 563-571.
9. Manzel, L.J., et al. 2009. Regulation of bacteria-induced intercellular adhesion molecule-1 by CCAAT/enhancer binding proteins. Am. J. Respir. Cell Mol. Biol. 40: 200-210.
10. Dong, L.Y., et al. 2010. Epidermal growth factor down-regulates the expression of human hepatic stimulator substance via CCAAT/enhancer-binding protein β in Hep G2 cells. Biochem. J. 431: 277-287.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.