SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP β (H-7): sc-7962

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CCAAT-enhancer binding proteins (C/EBP) are basic region/leucine zipper (bZIP) transcription factors selectively expressed during the differentiation of liver, adipose tissue, blood cells and the endocrine pancreas. C/EBP β is a member of the C/EBP transcription factor family. The C/EBP β gene encodes several isoforms, containing truncated transcription activation domains due to the alternative translational initiation at multipe AUG start sites. C/EBP β is also known as interleukin-6-dependent DNA-binding protein (IL6DBP), liver activator protein (LAP) or liver-enriched transcriptional activator protein transcription factor 5 (TCF5). C/EBP β contributes to the regulation of the acute phase response in hepatocytes. Stat3 has an important function in IL-6-mediated transcription of the C/EBP β gene that has direct implication for acute phase response in liver cells.The C/EBP β form requires phosphorylation for its DNA binding ability, and increased binding of C/EBP β isoforms during acute-phase reaction occurs through its upregulation and structural modification.

SOURCE

C/EBP β (H-7) is a mouse monoclonal antibody raised against amino acids 199-345 mapping at the C-terminus of C/EBP β of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-7962 X, 200 µg/0.1 ml.

APPLICATIONS

C/EBP β (H-7) is recommended for detection of C/EBP β and, to a lesser extent C/EBP α, C/EBP δ and C/EBP ε, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

C/EBP β (H-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of C/EBP β: 45 kDa.

Positive Controls: C/EBP β (h): 293T Lysate: sc-176940, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

STORAGE

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

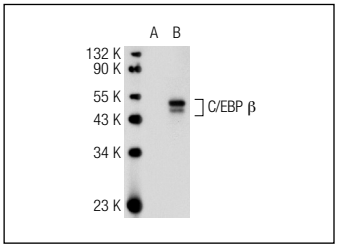
PROTOCOLS

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

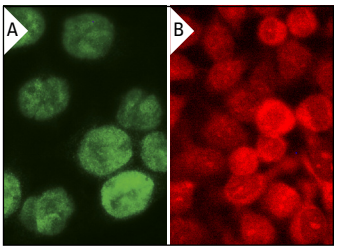
RESEARCH USE

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

DATA



C/EBP β (H-7): sc-7962. Western blot analysis of C/EBP β expression in non-transfected: sc-117752 (**A**) and human C/EBP β transfected: sc-176940 (**B**) 293T whole cell lysates.



C/EBP β (H-7): sc-7962. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**,**B**)

SELECT PRODUCT CITATIONS

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5. Duprez, E., et al. 2003. C/EBPβ: a major PML-RARA-responsive gene in retinoic acid-induced differentiation of APL cells. EMBO J. 22: 5806-5816.
6. 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.
7. Neal, J.W., et al. 2003. A constitutively active NFATc1 mutant induces a transformed phenotype in 3T3-L1 fibroblasts. J. Biol. Chem. 278: 17246-17254.
8. Hu, B., et al. 2004. CCAAT/enhancer-binding protein β isoforms and the regulation of α-smooth muscle actin gene expression by ILPhan SH.-1 β. J. Immunol. 173: 4661-4668.
9. 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.
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11. Keeshan, K., et al. 2010. Transformation by Tribbles homolog 2 (Trib2) requires both the Trib2 kinase domain and COP1 binding. Blood 116: 4948-4957.