SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP β (A-7): sc-398753

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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 increase binding of C/EBP β isoforms during acute-phase reaction occurs through its upregulation and structural modification.

REFERENCES

1. Grigorov, I., et al. 1998. Participation of two isoforms of C/EBP β transcription factor in the acute-phase regulation of the rat haptoglobin gene. Cell Biol. Int. 22: 685-693.
2. Hsieh, C.C., et al. 1998. Effects of age on the posttrancriptional regulation of C/EBP α and C/EBP β isoform synthesis in control and LPS-treated livers. Mol. Biol. Cell 9: 1479-1494.
3. Maytin, E.V., et al. 1998. Transcription factors C/EBP α, C/EBP β and CHOP (Gadd153) expressed during the differentiation program of keratinocytes *in vitro* and *in vivo*. J. Invest. Dermatol. 110: 238-246.
4. Niehof, M., et al. 2001. Interleukin-6-induced tethering of Stat3 to the LAP/C/EBP β promoter suggests a new mechanism of transcriptional regulation by Stat3. J. Biol. Chem. 276: 9016-9027.
5. Xiong, W., et al. 2001. Regulation of C/EBP β isoform synthesis by alternative translational initiation at multiple AUG start sites. Nucleic Acids Res. 29: 3087-3098.

CHROMOSOMAL LOCATION

Genetic locus: CEBPB (human) mapping to 20q13.13; Cebpb (mouse) mapping to 2 H3.

SOURCE

C/EBP β (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 269-297 at the C-terminus of C/EBP β of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-398753 X, 200 µg/0.1 ml.

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 β (A-7) is recommended for detection of C/EBP β 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 β siRNA (h): sc-29229, C/EBP β siRNA (m): sc-29862, C/EBP β siRNA (r): sc-270405, C/EBP β shRNA Plasmid (h): sc-29229-SH, C/EBP β shRNA Plasmid (m): sc-29862-SH, C/EBP β shRNA Plasmid (r): sc-270405-SH, C/EBP β shRNA (h) Lentiviral Particles: sc-29229-V, C/EBP β shRNA (m) Lentiviral Particles: sc-29862-V and C/EBP β shRNA (r) Lentiviral Particles: sc-270405-V.

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

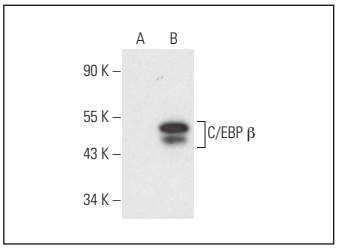
Molecular Weight of C/EBP β: 45 kDa.

Positive Controls: C/EBP β (h): 293T Lysate: sc-176940.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



C/EBP β (A-7): sc-398753. 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.

RESEARCH USE

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

CONJUGATES

See **C/EBP β (H-7): sc-7962** for C/EBP β antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.