SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP β (h): 293T Lysate: sc-176940

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.

REFERENCES

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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.
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7. Chakrabarty, A., et al. 2007. Ets-2 and C/EBP-β are important mediators of ovine trophoblast Kunitz domain protein-1 gene expression in trophoblast. BMC Mol. Biol. 8: 14.
8. Kim, J.W., et al. 2007. Effect of phosphorylation and S-S bond-induced dimerization on DNA binding and transcriptional activation by C/EBPβ. Proc. Natl. Acad. Sci. USA 104: 1800-1804.
9. Calella, A.M., et al. 2007. Neurotrophin/Trk receptor signaling mediates C/EBPα, -β and NeuroD recruitment to immediate-early gene promoters in neuronal cells and requires C/EBPs to induce immediate-early gene transcription. Neural Dev. 2: 4.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: CEBPB (human) mapping to 20q13.13.

PRODUCT

C/EBP β (h): 293T Lysate represents a lysate of human C/EBP β transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

C/EBP β (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive C/EBP β antibodies. Recommended use: 10-20 µl per lane.

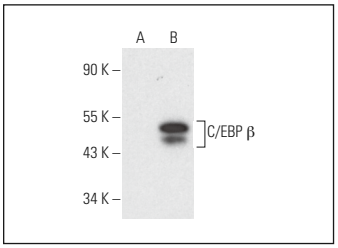
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

C/EBP β (A-7): sc-398753 is recommended as a positive control antibody for Western Blot analysis of enhanced human C/EBP β expression in C/EBP β transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

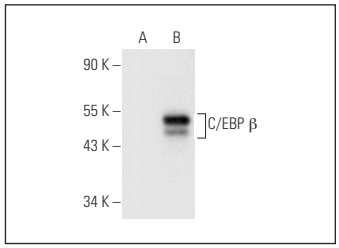
RECOMMENDED SUPPORT REAGENTS

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.

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.



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.

RESEARCH USE

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

PROTOCOLS

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