SANTA CRUZ BIOTECHNOLOGY, INC.

C/EBP δ (C-6): sc-365546

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: CEBPD (human) mapping to 8q11.21.

SOURCE

C/EBP δ (C-6) is a mouse monoclonal antibody raised against amino acids 31-170 mapping near the N-terminus of C/EBP δ of human 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-365546 X, 200 µg/0.1 ml.

C/EBP δ (C-6) is available conjugated to agarose (sc-365546 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365546 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365546 PE), fluorescein (sc-365546 FITC), Alexa Fluor® 488 (sc-365546 AF488), Alexa Fluor® 546 (sc-365546 AF546), Alexa Fluor® 594 (sc-365546 AF594) or Alexa Fluor® 647 (sc-365546 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365546 AF680) or Alexa Fluor® 790 (sc-365546 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

C/EBP δ (C-6) is recommended for detection of C/EBP δ of 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 δ siRNA (h): sc-37722, C/EBP δ shRNA Plasmid (h): sc-37722-SH and C/EBP δ shRNA (h) Lentiviral Particles: sc-37722-V.

C/EBP δ (C-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

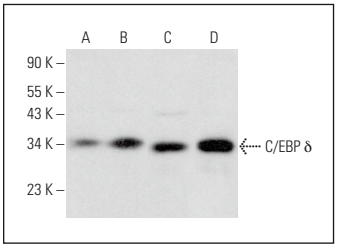
Molecular Weight of C/EBP δ: 28 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, A549 cell lysate: sc-2413 or HeLa whole cell lysate: sc-2200.

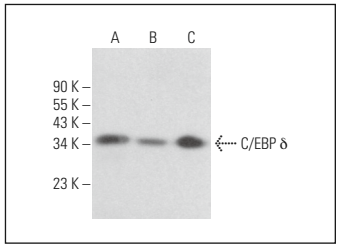
STORAGE

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

DATA



C/EBP δ (C-6): sc-365546. Western blot analysis of C/EBP δ expression in A549 (**A**), NCI-H460 (**B**) and JAR (**C**) whole cell lysates and HEL 92.1.7 nuclear extract (**D**).



C/EBP δ (C-6): sc-365546. Western blot analysis of C/EBP δ expression in HeLa (**A**), A549 (**B**) and Caco-2 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Dinic, S., et al. 2004. Expression of C/EBP δ in rat liver during development and the acute-phase response. Gen. Physiol. Biophys. 23: 499-504.
2. Do-Umehara, H.C., et al. 2013. Suppression of inflammation and acute lung injury by Miz1 via repression of C/EBP δ. Nat. Immunol. 14: 461-469.
3. Lee, C.H., et al. 2018. C/EBP δ drives interactions between human MAIT cells and endothelial cells that are important for extravasation. Elife 7: e32532.
4. Wang, D., et al. 2020. C/EBP δ-Slug-Lox1 axis promotes metastasis of lung adenocarcinoma via oxLDL uptake. Oncogene 39: 833-848.
5. Zheng, H., et al. 2021. Integrated single-cell and bulk RNA sequencing analysis identifies a cancer associated fibroblast-related signature for predicting prognosis and therapeutic responses in colorectal cancer. Cancer Cell Int. 21: 552.
6. Chan, T.C., et al. 2021. Biological significance of MYC and CEBPD coamplification in urothelial carcinoma: multilayered genomic, transcriptional and posttranscriptional positive feedback loops enhance oncogenic glycolysis. Clin. Transl. Med. 11: e674.
7. Le-Bel, G., et al. 2022. Influence of the postmortem/storage time of human corneas on the properties of cultured limbal epithelial cells. Cells 11: 2716.
8. Zhou, Y.W. and Wu, Y. 2022. Substrate viscoelasticity amplifies distinctions between transient and persistent LPS-induced signals. Adv. Healthc. Mater. 11: e2102271.
9. Zhu, G.Q., et al. 2023. $CD36^+$ cancer-associated fibroblasts provide immunosuppressive microenvironment for hepatocellular carcinoma via secretion of macrophage migration inhibitory factor. Cell Discov. 9: 25.

RESEARCH USE

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