

# C/EBP $\epsilon$ (H-75): sc-25770

## BACKGROUND

The transcription factor C/EBP  $\alpha$  (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  $\alpha$  regulates gene expression in a variety of tissues including liver, adipose, lung and intestine. C/EBP  $\alpha$  uses a bipartite structural motif to bind DNA. Two protein chains dimerize through a set of amphipathic  $\alpha$  helices termed the leucine zipper. Highly basic polypeptide regions emerge from the zipper to form a linked set of DNA contact surfaces. C/EBP  $\alpha$  appears to function exclusively in terminally differentiated, growth-arrested cells. Additional family members include C/EBP  $\beta$ , C/EBP  $\gamma$ , C/EBP  $\delta$  and C/EBP  $\epsilon$ , all of which exhibit similar DNA-binding specificities and affinities to C/EBP  $\alpha$ . Furthermore, C/EBP  $\beta$  and C/EBP  $\delta$  readily form heterodimers both with each other as well as with C/EBP  $\alpha$ .

## CHROMOSOMAL LOCATION

Genetic locus: CEBPE (human) mapping to 14q11.2; Cebpe (mouse) mapping to 14 C3.

## SOURCE

C/EBP  $\epsilon$  (H-75) is a rabbit polyclonal antibody raised against amino acids 1-75 of C/EBP  $\epsilon$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG 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-25770 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

C/EBP  $\epsilon$  (H-75) is recommended for detection of C/EBP  $\epsilon$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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  $\epsilon$  (H-75) is also recommended for detection of C/EBP  $\epsilon$  in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for C/EBP  $\epsilon$  siRNA (h): sc-37724, C/EBP  $\epsilon$  siRNA (m): sc-37725, C/EBP  $\epsilon$  shRNA Plasmid (h): sc-37724-SH, C/EBP  $\epsilon$  shRNA Plasmid (m): sc-37725-SH, C/EBP  $\epsilon$  shRNA (h) Lentiviral Particles: sc-37724-V and C/EBP  $\epsilon$  shRNA (m) Lentiviral Particles: sc-37725-V.

C/EBP  $\epsilon$  (H-75) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

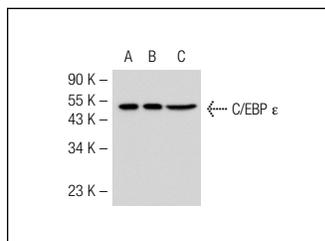
Molecular Weight of C/EBP  $\epsilon$  isoforms: 32/30/27/14 kDa.

Positive Controls: C/EBP  $\epsilon$  (h): 293T Lysate: sc-115748 or K-562 whole cell lysate: sc-2203.

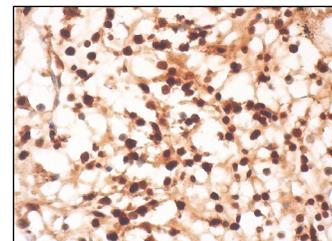
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



C/EBP  $\epsilon$  (H-75): sc-25770. Western blot analysis of C/EBP  $\epsilon$  expression in non-transfected 293T: sc-117752 (A), human C/EBP  $\epsilon$  transfected 293T: sc-115748 (B) and K-562 (C) whole cell lysates.



C/EBP  $\epsilon$  (H-75): sc-25770. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing nuclear and cytoplasmic staining of hematopoietic cells.

## SELECT PRODUCT CITATIONS

- Kuo, H.C., et al. 2006. Enhancement of caffeic acid phenethyl ester on all-*trans* retinoic acid-induced differentiation in human leukemia HL-60 cells. *Toxicol. Appl. Pharmacol.* 216: 80-88.
- Wei, W., et al. 2006. Degradation of C/EBP  $\beta$  in cultured myotubes is calpain-dependent. *J. Cell. Physiol.* 208: 386-398.
- Qi, X., et al. 2011. CCAAT/enhancer-binding protein  $\alpha$  (C/EBP  $\alpha$ ) is critical for interleukin-4 expression in response to Fc $\epsilon$ RI receptor cross-linking. *J. Biol. Chem.* 286: 16063-16073.

## 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.



Try C/EBP  $\epsilon$  (C-10): sc-515192 or C/EBP  $\epsilon$  (2154C4a): sc-130029, our highly recommended monoclonal alternatives to C/EBP  $\epsilon$  (H-75).