

C/EBP ϵ (2154C4a): sc-130029

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 .

REFERENCES

1. Johnson, P.F., et al. 1987. Identification of a rat liver nuclear protein that binds to the enhancer core element of three animal viruses. *Genes Dev.* 1: 133-146.
2. Landschulz, W.H., et al. 1988. Isolation of a recombinant copy of the gene encoding C/EBP. *Genes Dev.* 2: 786-800.
3. Birkenmeier, E.H., et al. 1989. Tissue-specific expression, developmental regulation, and genetic mapping of the gene encoding CCAAT/enhancer binding protein. *Genes Dev.* 3: 1146-1156.
4. Umek, R.M., et al. 1991. CCAAT-enhancer binding protein: a component of a differentiation switch. *Science* 251: 288-292.
5. Cao, Z., et al. 1991. Regulated expression of three C/EBP isoforms during adipose conversion of 3T3-L1 cells. *Genes Dev.* 5: 1538-1552.
6. Williams, S.C., et al. 1991. A family of C/EBP-related proteins capable of forming covalently linked leucine zipper dimers *in vitro*. *Genes Dev.* 5: 1553-1567.
7. Davydov, I.V., et al. 1995. Cloning of the cDNA encoding human C/EBP γ , a protein binding to the PRE-I enhancer element of the human interleukin-4 promoter. *Gene* 161: 271-275.

CHROMOSOMAL LOCATION

Genetic locus: CEBPE (human) mapping to 14q11.2.

SOURCE

C/EBP ϵ (2154C4a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of C/EBP ϵ of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

RESEARCH USE

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

APPLICATIONS

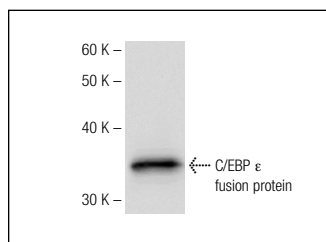
C/EBP ϵ (2154C4a) is recommended for detection of C/EBP ϵ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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

Molecular Weight of C/EBP ϵ : isoforms: 32/30/27/14 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

DATA



C/EBP ϵ (2154C4a): sc-130029. Western blot analysis of human recombinant C/EBP ϵ fusion protein.

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 for detailed protocols and support products.