

C/EBP ζ (S-12): sc-132220

BACKGROUND

C/EBP ζ (CCAAT/enhancer-binding protein ζ), also known as CBF, CBF2, NOC1 or HSP-CBF is a 1,054 amino acid nuclear protein belonging to the CBF/MAK21 family. C/EBP ζ stimulates transcription from the HSP70 and HSP40 promoters in a NF-Y dependent manner, requiring an intact NF-Y trimer which binds to the DNA. C/EBP ζ is thought to be a potential tumor suppressor gene, and aberrant methylation of the C/EBP ζ promoter may be involved with acute myeloid leukemia. The C/EBP ζ gene is conserved in a wide number of species including chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish and *C. elegans* and is located on human chromosome 2. Chromosome 2, the second largest human chromosome, consists of 237 million bases encoding over 1,400 genes, comprising approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2.

REFERENCES

- Lum, L.S., et al. 1990. A cloned human CCAAT-box-binding factor stimulates transcription from the human hsp70 promoter. *Mol. Cell. Biol.* 10: 6709-6717.
- Hoepfner, M.A., et al. 1996. Cloning and characterization of mouse CCAAT binding factor. *Nucleic Acids Res.* 24: 1091-1098.
- Ioualalen, N., et al. 2001. LAP, a lymphocyte activation gene-3 (LAG-3)-associated protein that binds to a repeated EP motif in the intracellular region of LAG-3, may participate in the down-regulation of the CD3/TCR activation pathway. *Eur. J. Immunol.* 31: 2885-2891.
- Imbriano, C., et al. 2001. HSP-CBF is an NF-Y-dependent coactivator of the heat shock promoters CCAAT boxes. *J. Biol. Chem.* 276: 26332-26339.
- Uramoto, H., et al. 2003. Physical interaction of tumour suppressor p53/p73 with CCAAT-binding transcription factor 2 (CTF2) and differential regulation of human high-mobility group 1 (HMG1) gene expression. *Biochem. J.* 371: 301-310.
- Qian, J., et al. 2005. Quantitative study on C/EBP ζ gene transcripts in patients with chronic myeloid leukemia using real-time quantitative PCR. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi* 22: 628-631.

CHROMOSOMAL LOCATION

Genetic locus: CEBPZ (human) mapping to 2p22.2; Cebpz (mouse) mapping to 17 E3.

SOURCE

C/EBP ζ (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of C/EBP ζ of human origin.

PRODUCT

Each vial contains 200 μ 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-132220 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-132220 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

C/EBP ζ (S-12) is recommended for detection of C/EBP ζ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with other C/EBP family members.

C/EBP ζ (S-12) is also recommended for detection of C/EBP ζ in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for C/EBP ζ siRNA (h): sc-94538, C/EBP ζ siRNA (m): sc-141798, C/EBP ζ shRNA Plasmid (h): sc-94538-SH, C/EBP ζ shRNA Plasmid (m): sc-141798-SH, C/EBP ζ shRNA (h) Lentiviral Particles: sc-94538-V and C/EBP ζ shRNA (m) Lentiviral Particles: sc-141798-V.

C/EBP ζ (S-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

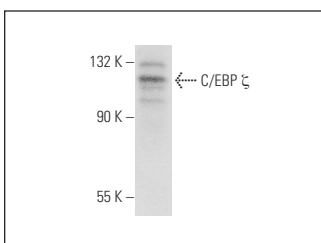
Molecular Weight of C/EBP ζ : 121 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



C/EBP ζ (S-12): sc-132220. Western blot analysis of C/EBP ζ expression in NIH/3T3 whole cell lysate.

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.