Anti-C/EBP Beta Antibody [SC55-05]

ET1610-9

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Rat, Mouse
Applications:	WB, FC, IP
Molecular Wt:	Predicted band size: 36 kDa
Clone number:	SC55-05

Description: The protein encoded by this intronless gene is a bZIP transcription factor that can bind as a homodimer to certain DNA regulatory regions. It can also form heterodimers with the related proteins CEBP-alpha, CEBP-delta, and CEBP-gamma. The encoded protein is important in the regulation of genes involved in immune and inflammatory responses and has been shown to bind to the IL-1 response element in the IL-6 gene, as well as to regulatory regions of several acute-phase and cytokine genes. In addition, the encoded protein can bind the promoter and upstream element and stimulate the expression of the collagen type I gene. CEBP-beta is critical for normal macrophage functioning, an important immune cell sub-type; mice unable to express CEBP-beta have macrophages that cannot differentiate (specialize) and thus are unable to perform all their biological functions - including macrophage-mediated muscle repair. Observational work has shown that expression of CEBP-beta in blood leukocytes is positively associated with muscle strength in humans, emphasizing the importance of the immune system, and particularly macrophages, in the maintenance of muscle function. Function of CEBPB gene can be effectively examined by siRNA knockdown based on an independent validation.

Immunogen:	Synthetic peptide within Rat C/EBP Beta aa 248-297 / 297.
Positive control:	PC-12 cell lysates, Hela, MCF-7, PC-12.
Subcellular location:	Cytoplasm, Nucleus.
Database links:	SwissProt: P17676 Human | P28033 Mouse | P21272 Rat

Recommended Dilutions:

WB	1:500-1:2,000
FC	1:50-1:100
IP	Use at an assay dependent concentration.

Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

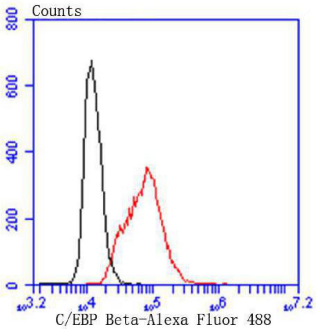

Fig1: Flow cytometric analysis of C/EBP Beta was done on Hela cells. The cells were fixed, permeabilized and stained with the primary antibody (ET1610-9, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1,000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

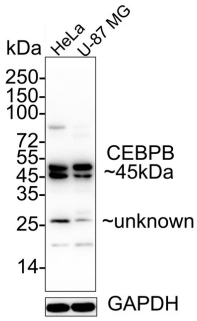

Fig2: Western blot analysis of C/EBP Beta on different lysates with Rabbit anti-C/EBP Beta antibody (ET1610-9) at 1/1,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: U-87 MG cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 45 kDa
Observed band size: 45 kDa

Exposure time: 60 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1610-9) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Background References

1. Viart V et al. Transcription factors and miRNAs that regulate fetal to adult CFTR expression change are new targets for cystic fibrosis. Eur Respir J 45:116-28 (2015).
2. Xu S et al. LIFRa-CT3 induces differentiation of a human acute myelogenous leukemia cell line HL-60 by suppressing miR-155 expression through the JAK/STAT Pathway. Leuk Res N/A:N/A (2014).