Revision 1

Store at -20C

#12814

C/EBP Antibody Sampler Kit

1 Kit (7 x 20 microliters)

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-C/EBPα (Ser21) Antibody	2841	20 µl	45 kDa	Rabbit
Phospho-C/EBPα (Thr222/226) Antibody	2844	20 µl	30, 42, 45 kDa	Rabbit
C/EBPα (D56F10) XP® Rabbit mAb	8178	20 µl	42, 28 kDa	Rabbit IgG
Phospho-C/EBPβ (Thr235) Antibody	3084	20 µl	19 LIP. 36 LAP. 38 LAP. kDa	Rabbit
C/EBPβ (LAP) Antibody	3087	20 µl	35 to 38 mouse LAP. 45 to 49 human LAP. kDa	Rabbit
C/EBPδ Antibody	2318	20 µl	29 kDa	Rabbit
CHOP (D46F1) Rabbit mAb	5554	20 µl	27 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The C/EBP Antibody Sampler Kit provides an economical means of evaluating the C/EBP family of transcription factors and several phosphorylation sites that are involved in its activation. The kit includes enough antibody to perform two western blot experiments with each primary antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Background

CCAAT/enhancer-binding proteins (C/EBPs) are transcription factors critical for cellular differentiation, terminal function, and inflammatory response. Six characterized family members (C/EBPα, β, δ, γ, ε, and ζ) are distributed in a variety of tissues (1). Translation from alternative start codons results in two C/EBPα isoforms (p42 and p30) that are strong transcriptional activators (2). Research studies indicate that insulin and insulin-like growth factor-I stimulate C/EBPα dephosphorylation, which may play a key role in insulin-induced repression of *GLUT4* transcription (3). Phosphorylation of C/EBPα at Thr222, Thr226, and Ser230 by GSK-3 may be required for adipogenesis (4). The two forms of C/EBPβ, 38 kDa liver activating protein (LAP) and the 20 kDa liver inhibitory protein (LIP), may result from alternative translation. The 38 kDa LAP protein is a transcriptional activator while LIP may inhibit C/EBPβ transcriptional activity (5). Phosphorylation of C/EBPβ at distinct sites stimulates its transcriptional activity (6-8). Phosphorylation at the rat-specific site Ser105 in C/EBPβ appears essential for C/EBPβ activation in rat (9). C/EBPδ protein is highly expressed in adipose tissue, lung, and intestine (10). Increased expression of C/EBPδ mRNA levels during adipogenesis suggests that C/EBPδ plays an important role in positively regulating adipogenesis (10,11). C/EBPδ is expressed in the mammalian nervous system and plays an important role in long-term memory (10,12). CHOP is a C/EBP-homologous protein that inhibits C/EBP and LAP in a dominant-negative manner (13). CHOP expression is induced by cellular stresses, including starvation; induced CHOP suppresses cell cycle progression from G1 to S phase (14). During ER stress, the level of CHOP expression is elevated and CHOP functions to mediate programmed cell death (15).

Background References

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Limited Uses