

Phospho-C/EBP α (Ser21) Antibody



100 μ l
 (10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #1050
Swiss-Prot Acc. #P49715

| Applications | Species Cross-Reactivity* | Molecular Wt. | Source |
|-----------------|---------------------------|---------------|----------|
| W Endogenous | H, M, (R, B) | 45 kDa | Rabbit** |

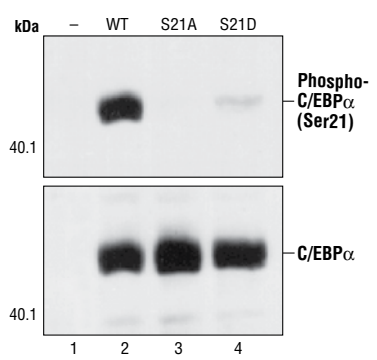
Background: CCAAT/enhancer-binding proteins (C/EBPs) are a family of transcription factors that are critical for cellular differentiation, terminal function and inflammatory response (1). Six members of the family have been characterized (C/EBP α , β , δ , γ , ϵ and ζ) and are distributed in a variety of tissues (1). Translation from alternative start codons results in two isoforms of C/EBP α (p42 and p30), which are both strong transcriptional activators (2). It has been reported that insulin and insulin-like growth factor-1 stimulate the dephosphorylation of C/EBP α , which may play a key role in insulin induced repression of GLUT4 transcription (3). Phosphorylation of C/EBP α at Thr222, Thr226 and Ser230 by GSK3 seems to be required for adipogenesis (4).

Specificity/Sensitivity: Phospho-C/EBP α (Ser21) Antibody detects endogenous levels of C/EBP α only when phosphorylated at Ser21. This antibody does not cross-react with other phosphorylated C/EBP isoforms.

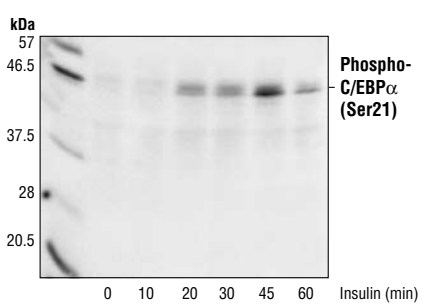
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser21 of human C/EBP α . Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Lekstrom-Hims, J. and Xanthopoulos, K.G. (1998) *J. Biol. Chem.* 273, 28545–28548.
- (2) Lin, F. et al. (1993) *Proc. Natl. Acad. Sci. USA* 90, 9606–9610.
- (3) Hemati, N. et al. (1997) *J. Biol. Chem.* 272, 25913–25919.
- (4) Ross, S.E. et al. (1999) *Mol. Cell. Biol.* 19, 8433–8441.
- (5) Radomska, H.S. et al. (2006) *J Exp Med* 203, 371–81.



Western blot analysis of extracts of COS cells untransfected (lane 1), or transfected with wild-type mouse C/EBP α (lane 2), S21A (lane 3), and S21D (lane 4) mutants, using Phospho-C/EBP α (Ser21) Antibody (upper) or C/EBP α Antibody (lower). (Provided by Dr. Hanna Radomska, Beth Israel Deaconess Medical Center, Boston, MA).



Western blot analysis of extracts from mouse adipocytes treated with insulin for the indicated times using Phospho-C/EBP α (Ser21) Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
 Western Blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.