

#2844 Store at -20°C

# Phospho-C/EBP $\alpha$ (Thr222/226) Antibody



100  $\mu$ 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)	30, 42, 45 kDa	Rabbit**

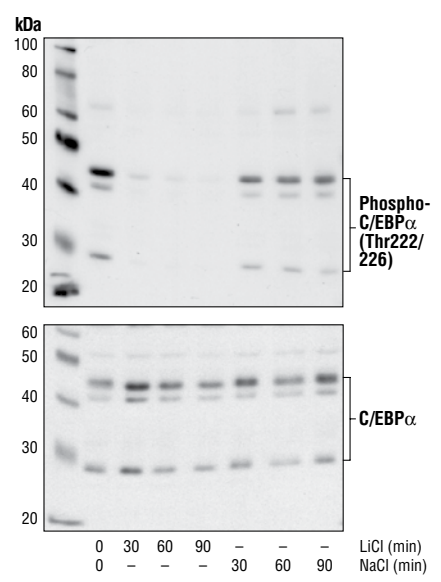
**Background:** CCAAT/enhancer-binding proteins (C/EBPs) are a family of transcription factors that are critical for cellular differentiation, terminal function and inflammatory response (1). Six members of the family have been characterized (C/EBP $\alpha$ ,  $\beta$ ,  $\delta$ ,  $\gamma$ ,  $\epsilon$  and  $\zeta$ ) and are distributed in a variety of tissues (1). Translation from alternative start codons results in two isoforms of C/EBP $\alpha$  (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 $\alpha$ , which may play a key role in insulin induced repression of GLUT4 transcription (3). Phosphorylation of C/EBP $\alpha$  at Thr222, Thr226 and Ser230 by GSK3 seems to be required for adipogenesis (4).

**Specificity/Sensitivity:** Phospho-C/EBP $\alpha$  (Thr222/226) Antibody detects endogenous levels of C/EBP $\alpha$  only when phosphorylated at Thr222 and Thr226. This antibody does not cross-react with other phosphorylated C/EBP isoforms.

**Source/Purification:** Polyclonal antibodies are produced by immunizing rabbits with a synthetic phosphorylated peptide (KLH-coupled) corresponding to residues surrounding Thr222/226 of mouse C/EBP $\alpha$ . 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.



Western blot analysis of extracts from U937 cells treated with either LiCl or NaCl for the indicated times, using Phospho-C/EBP $\alpha$  (Thr222/226) Antibody (upper) and C/EBP $\alpha$  antibody (lower). C/EBP $\alpha$  phosphorylation at Thr222/226 is abolished by the specific GSK3 inhibitor LiCl, but not by NaCl, indicating that phosphorylation at these sites depends on GSK3 kinase.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ 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.cellsignaling.com](http://www.cellsignaling.com).

Please visit [www.cellsignaling.com](http://www.cellsignaling.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.