

**#2841** Store at -20C

## Phospho-C/EBP $\alpha$ (Ser21) Antibody


**Cell Signaling**  
TECHNOLOGY®

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M	Endogenous	45	Rabbit	#P49715	1050

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	Phospho-C/EBP $\alpha$ (Ser21) Antibody detects endogenous levels of C/EBP $\alpha$ only when phosphorylated at serine 21. This antibody does not cross-react with other phosphorylated C/EBP isoforms.	
<b>Species predicted to react based on 100% sequence homology:</b>	Rat, Bovine	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser21 of human C/EBP $\alpha$ . Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	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-I 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 GSK-3 seems to be required for adipogenesis (4).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Lekstrom-Hims, J. and Xanthopoulos, K.G. (1998) <i>J. Biol. Chem.</i> 273, 28545-28548.</li> <li>2. Lin, F. et al. (1993) <i>Proc. Natl. Acad. Sci. USA</i> 90, 9606-9610.</li> <li>3. Hemati, N. et al. (1997) <i>J. Biol. Chem.</i> 272, 25913-25919.</li> <li>4. Ross, S.E. et al. (1999) <i>Mol. Cell. Biol.</i> 19, 8433-8441.</li> <li>5. Radomska, H.S. et al. (2006) <i>J Exp Med</i> 203, 371-81.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
<b>Trademarks and Patents</b>	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit <a href="http://cellsignal.com/trademarks">cellsignal.com/trademarks</a> for more information.
<b>Limited Uses</b>	Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in

writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.