

C/EBP Antibody Sampler Kit

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

1 Kit (7 x 20 microliters)

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

| Product Includes | Product # | Quantity | Mol. Wt | Isotype/Source |
|----------------------------------------------------|-----------|-------------|---------------------------------------------|----------------|
| Phospho-C/EBP α (Ser21) Antibody | 2841 | 20 μ l | 45 kDa | Rabbit |
| Phospho-C/EBP α (Thr222/226) Antibody | 2844 | 20 μ l | 30, 42, 45 kDa | Rabbit |
| C/EBP α (D56F10) XP [®] Rabbit mAb | 8178 | 20 μ l | 42, 28 kDa | Rabbit IgG |
| Phospho-C/EBP β (Thr235) Antibody | 3084 | 20 μ l | 19 LIP. 36 LAP. 38 LAP. kDa | Rabbit |
| C/EBP β (LAP) Antibody | 3087 | 20 μ l | 35 to 38 mouse LAP. 45 to 49 human LAP. kDa | Rabbit |
| C/EBP δ Antibody | 2318 | 20 μ l | 29 kDa | Rabbit |
| CHOP (D46F1) Rabbit mAb | 5554 | 20 μ l | 27 kDa | Rabbit IgG |
| Anti-rabbit IgG, HRP-linked Antibody | 7074 | 100 μ l | | 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 μ g/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/EBP α , β , δ , γ , ϵ , and ζ) are distributed in a variety of tissues (1). Translation from alternative start codons results in two C/EBP α isoforms (p42 and p30) that are strong transcriptional activators (2). Research studies indicate that insulin and insulin-like growth factor-I stimulate C/EBP α dephosphorylation, 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 GSK-3 may be required for adipogenesis (4). The two forms of C/EBP β , 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/EBP β transcriptional activity (5). Phosphorylation of C/EBP β at distinct sites stimulates its transcriptional activity (6-8). Phosphorylation at the rat-specific site Ser105 in C/EBP β appears essential for C/EBP β activation in rat (9). C/EBP δ protein is highly expressed in adipose tissue, lung, and intestine (10). Increased expression of C/EBP δ mRNA levels during adipogenesis suggests that C/EBP δ plays an important role in positively regulating adipogenesis (10,11). C/EBP δ 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

1. Lekstrom-Himes, J. and Xanthopoulos, K.G. (1998) *J Biol Chem* 273, 28545-8.
2. Lin, F.T. et al. (1993) *Proc Natl Acad Sci U S A* 90, 9606-10.
3. Hemati, N. et al. (1997) *J Biol Chem* 272, 25913-9.
4. Ross, S.E. et al. (1999) *Mol Cell Biol* 19, 8433-41.
5. Calkhoven, C.F. et al. (2000) *Genes Dev* 14, 1920-32.
6. Wegner, M. et al. (1992) *Science* 256, 370-3.
7. Trautwein, C. et al. (1993) *Nature* 364, 544-7.
8. Nakajima, T. et al. (1993) *Proc Natl Acad Sci U S A* 90, 2207-11.
9. Buck, M. et al. (1999) *Mol Cell* 4, 1087-92.
10. Ramji, D.P. and Foka, P. (2002) *Biochem J* 365, 561-75.
11. Cao, Z. et al. (1991) *Genes Dev* 5, 1538-52.
12. Taubenfeld, S.M. et al. (2001) *J Neurosci* 21, 84-91.
13. Ron, D. and Habener, J.F. (1992) *Genes Dev* 6, 439-53.
14. Barone, M.V. et al. (1994) *Genes Dev* 8, 453-64.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

XP is a registered trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

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.