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Phospho-(Ser) 14-3-3 Binding Motif (4E2) Mouse mAb



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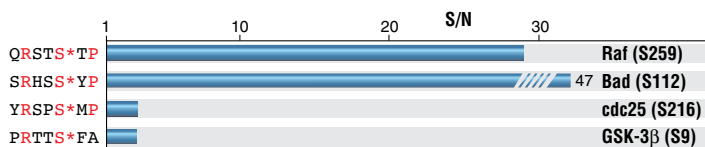
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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Motif	Isotype
W, IP, E-P Endogenous	All	(R/K)XX(S*)XP	Mouse IgG1**

Background: The 14-3-3 proteins are a highly conserved family of proteins involved in the regulation of cell survival, apoptosis, proliferation and checkpoint control (1-5). Biological regulation by 14-3-3 is mediated through phosphorylation-dependent protein-protein interactions (6). Two different phospho-Ser-containing motifs are found within nearly all known 14-3-3 binding proteins (7). Motif 1 (Arg/Lys and Ser at positions -3 and -2, phospho-Ser at position 0, and Pro at position +2) is found in critical regulatory proteins including Bad, cdc25C, FKHL1, PKC and c-Raf (5,7). Phospho-(Ser) 14-3-3 Binding Motif Polyclonal and (4E2) Monoclonal Antibodies provide powerful tools for the discovery and characterization of potential 14-3-3 binding proteins containing this motif and for high throughput drug discovery.

Specificity/Sensitivity: Phospho-(Ser) 14-3-3 Binding Motif (4E2) Mouse mAb binds peptides and proteins containing phospho-Ser surrounded by Pro at the +2 position and Arg/Lys at the -3 position. By ELISA, the antibody recognizes a wide range of peptides containing this phosphorylated 14-3-3 binding motif in a manner that is phospho-specific and largely independent of the surrounding amino acid sequence. The antibody weakly cross-reacts with sequences containing phospho-Thr instead of phospho-Ser in this motif, and with sequences containing phospho-Ser surrounded by Phe at the +1 position and Arg/Lys at the -3 position. No cross-reactivity is observed with corresponding nonphosphorylated sequences or with other phospho-Ser/Thr/Tyr containing motifs. Phospho-(Ser) 14-3-3 Binding Motif (4E2) Mouse mAb complements our polyclonal Phospho-(Ser) 14-3-3 Binding Motif Antibody #9601 by showing slightly different and overlapping specificity. (U.S. Patent No's.: 6,441,140; 6,982,318; 7,259,022; 7,344,714; U.S.S.N. 11,484,485; and all foreign equivalents.)



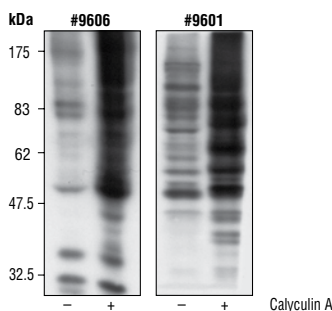
Phospho-(Ser) 14-3-3 Binding Motif (4E2) Mouse mAb ELISA assay: Signal-to-noise ratio of phospho- versus nonphospho-14-3-3 binding motif peptides. (S* denotes phosphorylated serine.)

License/Use Restrictions: Use of CST Motif Antibodies within certain methods (e.g., U.S. Patent No.'s 7,198,896 & 7,300,753) may require a license from CST. For information regarding academic licensing terms please have your technology transfer office contact CST Legal Department at CST_ip@cellsignal.com. For information regarding commercial licensing terms please contact CST Pharma Services Department at ptmscan@cellsignal.com.

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—zebra fish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.



Western blot analysis of extracts from A431 cells, untreated or calyculin A-treated, using Phospho-(Ser) 14-3-3 Binding Motif (4E2) Mouse mAb (left) or Phospho-(Ser) 14-3-3 Binding Motif Antibody #9601 (right).

Source/Purification: Monoclonal antibody is produced by immunizing mice with phospho-(Ser) 14-3-3 binding motif peptides (KLH-coupled).

Background References:

- (1) Aitken, A. (1995) *Trends Biochem Sci* 20, 95–7.
- (2) Zha, J. et al. (1996) *Cell* 87, 619–28.
- (3) Piwnicka-Worms, H. (1999) *Nature* 401, 535, 537.
- (4) Tzivion, G. et al. (1998) *Nature* 394, 88–92.
- (5) Xing, H. et al. (2000) *EMBO J* 19, 349–58.
- (6) Muslin, A.J. et al. (1996) *Cell* 84, 889–97.
- (7) Yaffe, M.B. et al. (1997) *Cell* 91, 961–71.

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.

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

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

Recommended Antibody Dilutions:

Western blotting	1:4000
Immunoprecipitation	1:20
ELISA-Peptide	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.