

#9606 Store at -20°C

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


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

Applications: WB, IP, E-P	Reactivity: All	Sensitivity: Endogenous	Source/Isotype: Mouse IgG1
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Peptide ELISA (DELFI A)

Dilution

1:4000
1:20
1:1000

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.

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.

Source / Purification

Monoclonal antibody is produced by immunizing animals with phospho-(Ser) 14-3-3 binding motif peptides.

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.

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **E-P:** Peptide ELISA (DELFI A)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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