Revision 1

Store at +4C

#8050

Phospho-Akt Substrate (RXXS*/T*) (110B7E) Rabbit mAb (Magnetic Bead Conjugate)

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:	Source/Isotype:
IP	All	Endogenous	Rabbit IgG

Product Usage Information

Application	Dilution
Immunoprecipitation	1:20

Storage

Supplied in PBS Buffer (pH 7.2), 0.1% Tween® 20. Store at 4°C. Do not aliquot the antibodies.

Specificity / Sensitivity

Phospho-Akt Substrate (RXXS*/T*) (110B7E) Rabbit mAb (Magnetic Bead Conjugate) recognizes peptides and proteins containing phospho-Ser/Thr preceded by Arg at the -3 position. There is some preference observed for peptides that contain phospho-Ser/Thr preceded by Arg at both positions -5 and -3. (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.)

Source / Purification

Monoclonal antibody is produced by immunizing animals with synthetic phospho-Akt substrate peptides.

Product Description

This Cell Signaling Technology antibody is immobilized by the covalent reaction of formylbenzamide-modified antibody with hydrazide-activated magnetic bead.
Phospho-Akt Substrate (RXXS*/T*) (110B7E) Rabbit mAb (Magnetic Bead Conjugate) is useful for immunoprecipitation of phosphorylated Akt substrate proteins.

Background

An important class of kinases, referred to as Arg-directed kinases or AGC-family kinases, includes cAMP-dependent protein kinase (PKA), cGMP-dependent protein kinase (PKG), protein kinase C, Akt, and RSK. These kinases share a substrate specificity characterized by Arg at position -3 relative to the phosphorylated Ser or Thr (1,2). Akt plays a central role in mediating critical cellular responses including cell growth and survival, angiogenesis, and transcriptional regulation (3-5). While a number of Akt substrates are known (such as GSK-3, Bad, and caspase-9) many important substrates await discovery. Akt phosphorylates substrates only at Ser/Thr in a conserved motif characterized by Arg at positions -5 and -3 (6). Phospho-Akt substrate-specific antibodies from Cell Signaling Technology are powerful tools for investigating the regulation of phosphorylation by Akt and other Arg-directed kinases, as well as for high throughput kinase drug discovery.

Background References

1. Montminy, M. (1997) *Annu Rev Biochem* 66, 807-22.
2. Pearson, R.B. and Kemp, B.E. (1991) *Methods Enzymol* 200, 62-81.
3. Marte, B.M. and Downward, J. (1997) *Trends Biochem Sci* 22, 355-8.
4. Jiang, B.H. et al. (2000) *Proc Natl Acad Sci USA* 97, 1749-53.
5. Scheid, M.P. and Woodgett, J.R. (2000) *Curr Biol* 10, R191-4.
6. Alessi, D.R. et al. (1996) *FEBS Lett* 399, 333-8.

Species Reactivity

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

Applications Key

IP: Immunoprecipitation

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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Limited Uses

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