#6950 Store at -20°C

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

Cell Signaling TECHNOLOGY®

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

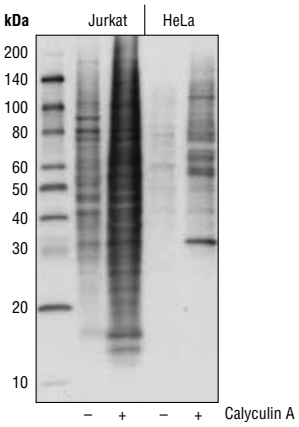
Applications	Species Cross-Reactivity*	Isotype
W Endogenous	All	Rabbit IgG

Description: This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Akt Substrate (RXXS*/T*) (110B7E) Rabbit mAb #9614.

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 including GSK-3, Bad and caspase-9 are known, many important substrates await discovery. Akt phosphorylates substrates only at serine/threonine in a conserved motif characterized by arginine 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.

Specificity/Sensitivity: Phospho-Akt Substrate (RXXS*/T*) (110B7E) Rabbit mAb (HRP Conjugate) recognizes peptides and proteins containing phospho-serine/threonine preceded by arginine at the -3 position. There is some preference observed for peptides that contain phospho-serine/threonine preceded by arginine at both positions -5 and -3.

Source/Purification: Monoclonal antibody is produced by immunizing animals with synthetic phospho-Akt substrate peptides.



Western blot analysis of extracts from Jurkat and HeLa cells, untreated or treated with Calyculin A #9902 (0.1 µM, 45 min), using Phospho-Akt Substrate (RXXS/T*) (110B7E) Rabbit mAb (HRP Conjugate).*

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.

Storage: Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

Recommended Antibody Dilutions:

Western blotting	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.

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**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.