Revision 1

#10001 Store at -20C

Phospho-Akt Substrate (RXRXXS*/T*) (23C8D2) Rabbit mAb

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:
WB, E-P	All	Endogenous	Rabbit

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Peptide ELISA (DELFIA)	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-Akt Substrate (RXRXXS*/T*) (23C8D2) Rabbit mAb recognizes endogenous proteins containing phospho-Ser/Thr preceded by Arg at positions -5 and -3 in a manner largely independent of the surrounding amino acid sequence. Minor cross-reactivity is observed for proteins that contain phospho-Ser/Thr preceded by Arg at position -3 only. No cross-reactivity is observed with the corresponding nonphosphorylated sequences or with other phospho-Ser/Thr-containing motifs.

Source / Purification

Monoclonal antibody is produced by immunizing animals with an Akt substrate peptide library.

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).

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 **E-P:** Peptide ELISA (DELFIA)

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

Trademarks and Patents

Cell Signaling Technology is a 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.