

**#9769** Store at -20°C

## 14-3-3 Family Antibody Sampler Kit

1 Kit (6 x 20 microliters)



**Cell Signaling**  
TECHNOLOGY®

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
14-3-3 β/α Antibody	9636	20 μl	28 kDa	Rabbit
14-3-3 γ (D15B7) Rabbit mAb	5522	20 μl	27 kDa	Rabbit IgG
14-3-3 ζ/δ (D7H5) Rabbit mAb	7413	20 μl	28 kDa	Rabbit IgG
14-3-3 ε Antibody	9635	20 μl	28 kDa	Rabbit
14-3-3 τ Antibody	9638	20 μl	28 kDa	Rabbit
14-3-3 η (D23B7) Rabbit mAb	5521	20 μl	27 kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 μl		Goat

Please visit [cellsignal.com](http://cellsignal.com) for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

### Description

The 14-3-3 Family Antibody Sampler Kit provides an economical means to investigate the expression of various 14-3-3 isoforms within the cell. The kit contains enough primary and secondary antibodies to perform two Western blot experiments.

### 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.

### Background

The 14-3-3 family of proteins plays a key regulatory role in signal transduction, checkpoint control, apoptotic and nutrient-sensing pathways (1,2). 14-3-3 proteins are highly conserved and ubiquitously expressed. There are at least seven isoforms, β, γ, ε, σ, ζ, τ, and η that have been identified in mammals. The initially described α and δ isoforms are confirmed to be phosphorylated forms of β and ζ, respectively (3). Through their amino-terminal α helical region, 14-3-3 proteins form homo- or heterodimers that interact with a wide variety of proteins: transcription factors, metabolic enzymes, cytoskeletal proteins, kinases, phosphatases, and other signaling molecules (3,4). The interaction of 14-3-3 proteins with their targets is primarily through a phospho-Ser/Thr motif. However, binding to divergent phospho-Ser/Thr motifs, as well as phosphorylation independent interactions has been observed (4). 14-3-3 binding masks specific sequences of the target protein, and therefore, modulates target protein localization, phosphorylation state, stability, and molecular interactions (1-4). 14-3-3 proteins may also induce target protein conformational changes that modify target protein function (4,5). Distinct temporal and spatial expression patterns of 14-3-3 isoforms have been observed in development and in acute response to extracellular signals and drugs, suggesting that 14-3-3 isoforms may perform different functions despite their sequence similarities (4). Several studies suggest that 14-3-3 isoforms are differentially regulated in cancer and neurological syndromes (2,3).

### Background References

1. Muslin, A.J. and Xing, H. (2000) *Cell Signal* 12, 703-9.
2. Mackintosh, C. (2004) *Biochem J* 381, 329-42.
3. Dougherty, M.K. and Morrison, D.K. (2004) *J Cell Sci* 117, 1875-84.
4. Yaffe, M.B. (2002) *FEBS Lett* 513, 53-7.
5. Bridges, D. and Moorhead, G.B. (2004) *Sci STKE* 2004, re10.

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