

#9635 Store at -20C

## 14-3-3 ε Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	28	Rabbit	#P62258	7531

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	14-3-3 ε Antibody detects endogenous levels of total 14-3-3 ε protein.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human 14-3-3 ε. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	<p>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).</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>Muslin, A.J. and Xing, H. (2000) <i>Cell Signal</i> 12, 703-9.</li> <li>Mackintosh, C. (2004) <i>Biochem J</i> 381, 329-42.</li> <li>Dougherty, M.K. and Morrison, D.K. (2004) <i>J Cell Sci</i> 117, 1875-84.</li> <li>Yaffe, M.B. (2002) <i>FEBS Lett</i> 513, 53-7.</li> <li>Bridges, D. and Moorhead, G.B. (2004) <i>Sci STKE</i> 2004, re10.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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