

#4605 Store at -20°C

Phospho-Doublecortin (Ser297) Antibody



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:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H R	Endogenous	45	Rabbit	#O43602	1641

Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	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.	
Specificity / Sensitivity	Phospho-Doublecortin (Ser297) Antibody detects endogenous levels of doublecortin only when phosphorylated at Ser297.	
Species predicted to react based on 100% sequence homology:	Mouse	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser297 of doublecortin. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Mutations in doublecortin (<i>DCX</i>) cause Lissencephaly (smooth brain), a neuronal migration disorder characterized by epilepsy and mental retardation (1). Doublecortin is a microtubule-associated protein that stabilizes and bundles microtubules. A conserved doublecortin domain mediates the interaction with microtubules, and interestingly most missense mutations cluster in this domain (2). Kinases JNK, CDK5, and PKA phosphorylate doublecortin. JNK phosphorylates Thr321, Thr331, and Ser334 while PKA phosphorylates Ser47 and CDK5 phosphorylates Ser297 (3-5). Phosphorylation of Ser297 lowers the affinity of doublecortin to microtubules. Furthermore, mutations of Ser297 result in migration defects (5).	
Background References	<ol style="list-style-type: none"> 1. Gleeson, J.G. et al. (1998) <i>Cell</i> 92, 63-72. 2. Reiner, O. et al. (2004) <i>Cell Cycle</i> 3, 747-51. 3. Gdalyahu, A. et al. (2004) <i>EMBO J</i> 23, 823-32. 4. Schaar, B.T. et al. (2004) <i>Neuron</i> 41, 203-13. 5. Tanaka, T. et al. (2004) <i>Neuron</i> 41, 215-27. 	

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
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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