

#14802 Store at -20°C

Doublecortin (A8L1U) Rabbit mAb



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

Applications: IF-F	Reactivity: M	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #O43602	Entrez-Gene Id: 1641
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Product Usage Information	Application Immunofluorescence (Frozen)	Dilution 1:400
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	Doublecortin (A8L1U) Rabbit mAb recognizes endogenous levels of total doublecortin protein.	
Species predicted to react based on 100% sequence homology:	Human	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human doublecortin protein.	
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).
Applications Key	IF-F: Immunofluorescence (Frozen)
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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