

#9397 Store at -20°C

Phospho-CRMP-2 (Thr514) Antibody



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	60-80	Rabbit	#Q16555	1808

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-CRMP-2 (Thr514) Antibody detects endogenous levels of CRMP-2 only when phosphorylated at Thr514.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide surrounding Thr514 of human CRMP-2. Antibodies are purified by peptide affinity chromatography.	
Background	Collapsin Response Mediator Protein-2 (CRMP-2) is expressed at high levels in the developing nervous system and plays a critical role in axonal outgrowth by specifying axon/dendrite fate and establishing neuronal polarity (1,2). CRMP-2 enhances axon elongation and branching by binding to tubulin heterodimers to promote microtubule assembly (3). GSK-3β inactivates CRMP-2 by phosphorylating it at Thr514. CRMP-2 is primed following phosphorylation at Ser522 by CDK5 and at Thr518 by GSK-3β (2). Phosphorylation of CRMP-2, which decreases tubulin binding ability, can be inhibited by NT-3 and BDNF through the PI3 kinase/Akt pathway (2). CRMP-2 also mediates semaphorin-induced growth cone collapse (4). Hyperphosphorylation of CRMP-2 is found in Alzheimer disease plaques with concurrent elevated GSK-3β activity in these patients (5).	
Background References	<ol style="list-style-type: none"> Gu, Y. and Ihara, Y. (2000) <i>J Biol Chem</i> 275, 17917-20. Yoshimura, T. et al. (2005) <i>Cell</i> 120, 137-49. Fukata, Y. et al. (2002) <i>Nat Cell Biol</i> 4, 583-91. Goshima, Y. et al. (1995) <i>Nature</i> 376, 509-14. Cole, A.R. et al. (2004) <i>J Biol Chem</i> 279, 50176-80. 	

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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