

Store at  
-20°C

# CRMP-2 Antibody

#9393

Cell Signaling  
TECHNOLOGY®Support: +1-978-867-2388 (U.S.)  
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orders@cellsignal.comEntrez-Gene ID #1808  
UniProt ID #Q16555

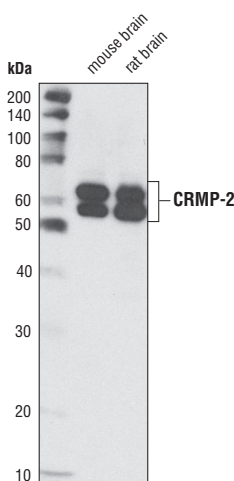
rev. 09/21/16

**For Research Use Only. Not For Use In Diagnostic Procedures.****Applications**  
W, IF-IC  
Endogenous**Species Cross-Reactivity\***  
H, M, R**Molecular Wt.**  
60-80 kDa**Source**  
Rabbit

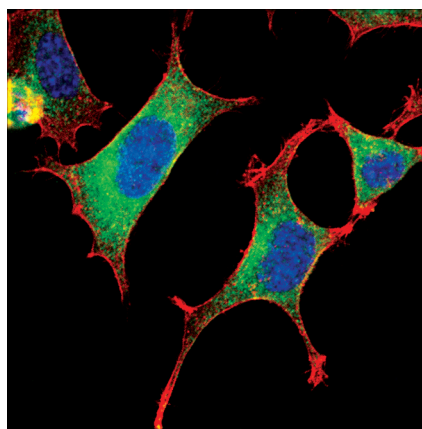
**Background:** Collapsin Response Mediator Protein-2 (CRMP-2) is expressed at high levels in the developing nervous system and plays a critical role in axonal outgrowth by specifying axon/dendrite fate and establishing neuronal polarity (1,2). CRMP-2 enhances axon elongation and branching by binding to tubulin heterodimers to promote microtubule assembly (3). GSK-3 $\beta$  inactivates CRMP-2 by phosphorylating it at Thr514. CRMP-2 is primed following phosphorylation at Ser522 by CDK5 and at Thr518 by GSK-3 $\beta$  (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-3 $\beta$  activity in these patients (5).

**Specificity/Sensitivity:** CRMP-2 Antibody detects endogenous levels of total CRMP-2 protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide of human CRMP-2. Antibodies are purified by peptide affinity chromatography.



Western blot analysis of extracts from mouse and rat brain using CRMP-2 Antibody.



Confocal immunofluorescent analysis of PC-12 cells using CRMP-2 Antibody (green). Actin filaments have been labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com)

**Background References:**

- (1) Gu, Y. and Ihara, Y. (2000) *J Biol Chem* 275, 17917-20.
- (2) Yoshimura, T. et al. (2005) *Cell* 120, 137-49.
- (3) Fukata, Y. et al. (2002) *Nat Cell Biol* 4, 583-91.
- (4) Goshima, Y. et al. (1995) *Nature* 376, 509-14.
- (5) Cole, A.R. et al. (2004) *J Biol Chem* 279, 50176-80.

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Tween is a registered trademark of ICI Americas, Inc.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.