

Anti-CRMP2 (Thr-555), Phosphospecific Antibody
Catalog # AN1734**Specification**

Anti-CRMP2 (Thr-555), Phosphospecific Antibody - Product Information

Primary Accession	Q16555
Reactivity	Bovine
Host	Mouse
Clonality	Mouse Monoclonal
Isotype	IgG1
Calculated MW	62294

Anti-CRMP2 (Thr-555), Phosphospecific Antibody - Additional Information

Gene ID	1808
Other Names	
DRP-2, Toad-64, CRMP-62	

Target/Specificity

CRMP2 (CRMP-62, TOAD-64, DRP-2) is a microtubule associated protein involved in neuron development and axon pathfinding. CRMP2 binds to tubulin heterodimers and promotes microtubule assembly. The overexpression of CRMP2 facilitates the rate of axonal growth, whereas the mutated form that lacks activity toward the microtubule assembly inhibits axonal growth in a dominant negative manner. Phosphorylation of CRMP2 regulates its activity and this type of regulation has been implicated in axon growth cone collapse induced by several repulsive cues. Cdk5 and GSK3 phosphorylation occurs downstream of the repulsive cue, Sema-3A. Several residues in CRMP2 are phosphorylated by GSK3 (Ser-518, Thr-514, and Thr-509), and a priming site (Ser-522). These sites are conserved in human CRMP1 and CRMP4, but not in CRMP3 or CRMP5. The priming site is also phosphorylated by Cdk5. In contrast, ROCK phosphorylates Thr-555 leading to LPA, MAG, or Ephrin-A5 mediated growth cone collapse. Thus, CRMP2 phosphorylation status may be a critical element of pathways that control axon pathfinding.

Format

Antigen Affinity Purified

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Anti-CRMP2 (Thr-555), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

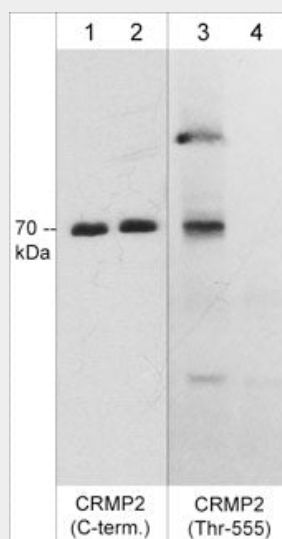
Blue Ice

Anti-CRMP2 (Thr-555), Phosphospecific Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-CRMP2 (Thr-555), Phosphospecific Antibody - Images



Western blot of rat PC12 cells stimulated with calyculin A (100 nM) for 30 min (lanes 1-4). Then the blot was treated with lambda phosphatase to dephosphorylate CRMP2 (lanes 2 & 4). The blot was probed with rabbit polyclonal anti-CRMP2 (C-terminal Region) antibody (lanes 1 & 2) or mouse monoclonal anti-CRMP2 (Thr-555) antibody (lanes 3 & 4).

Anti-CRMP2 (Thr-555), Phosphospecific Antibody - Background

CRMP2 (CRMP-62, TOAD-64, DRP-2) is a microtubule associated protein involved in neuron development and axon pathfinding. CRMP2 binds to tubulin heterodimers and promotes microtubule assembly. The overexpression of CRMP2 facilitates the rate of axonal growth, whereas the mutated form that lacks activity toward the microtubule assembly inhibits axonal growth in a dominant negative manner. Phosphorylation of CRMP2 regulates its activity and this type of regulation has been implicated in axon growth cone collapse induced by several repulsive cues. Cdk5 and GSK3 phosphorylation occurs downstream of the repulsive cue, Sema-3A. Several residues in CRMP2 are phosphorylated by GSK3 (Ser-518, Thr-514, and Thr-509), and a priming site (Ser-522). These sites are conserved in human CRMP1 and CRMP4, but not in CRMP3 or CRMP5. The priming site is also phosphorylated by Cdk5. In contrast, ROCK phosphorylates Thr-555 leading to LPA, MAG, or Ephrin-A5 mediated growth cone collapse. Thus, CRMP2 phosphorylation status may be a critical element of pathways that control axon pathfinding.