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Product datasheet for TA389109

Phospho-DPYSL2 (pThr555) Mouse Antibody [Clone ID: M539]

Product data:

Product Type:	Primary Antibodies
Clone Name:	M539
Applications:	WB
Recommended Dilution:	**WB**: 1:500
Reactivity:	Human, Rat, Mouse
Host:	Mouse
Isotype:	IgG1
Immunogen:	Clone M539 was generated from a phospho-CRMP2 (Thr-555) synthetic peptide (coupled to carrier protein) corresponding to amino acids surrounding Thr-555 in human CRMP2. This sequence is conserved in rat and mouse CRMP2 and the phospho-site is not conserved in other CRMP family members.
Specificity:	The antibody detects a 70 kDa* protein corresponding to CRMP2 on immunoblots of rat PC12 or mouse C2C12 cells treated with calyculin A. This reactivity is not observed after lambda phosphatase dephosphorylation of Thr-555.
Formulation:	PBS + 1 mg/ml BSA, 0.05% NaN3 and 50% glycerol
Concentration:	lot specific
Purification:	Antigen Affinity Purified
Conjugation:	Unconjugated
Storage:	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
Stability:	After date of receipt, stable for at least 1 year at -20°C.
Predicted Protein Size:	70
Database Link:	Q16555

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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.

Note: Protein G purified tissue culture supernatant.