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Rabbit Anti-Phospho-CRMP2 (Thr514+Ser518)/Cy5 Conjugated antibody

SL8284R-Cy5

Product Name	Anti-Phospho-CRMP2 (Thr514+Ser518)/Cy5
Chinese Name	Cy5 标记的磷酸化二氢嘧啶酶样 2 抗体
Alias	CRMP2 (phospho T514 + S518); CRMP2 (phospho T514+S518); CRMP-2(phospho Thr514+S518); p-CRMP2(Thr514+S518); CRMP2/Dpysl2(DRP 2; Collapsin response mediator protein 2; Collapsin response mediator protein hCRMP 2; CRAM; CRMP 2; DHPRP 2; DHPRP2; Dihydr pyrimidinase 2; Dihydropyrimidinase 2; Dihydropyrimidinase like 2; Dihydropyrimidinase like 2 long form;Dihydropyrimidinase related protein 2; DPYL 2; DPYL2; DPYSL 2; DPYSL2; DRP 2; DRP2; Musunc 33; Musunc33; N2A3; TOAD 64; TOAD64; ULIP 2 protein; Ulip2.
Product Type	Phosphorylated anti
Research Area	Cell biology immunology Neurobiology Growth factors and hormones
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Mouse,Rat(predicted:Chicken,Pig,Cow,Horse,Sheep)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	62kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthesised phosphopeptide derived from human CRMP2 around the phosphorylation site of Thr514+Ser518
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH

7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Product Detail

background:
Collapsin response mediator proteins (CRMPs) are cytosolic phosphoproteins involved in neuronal differentiation and axonal guidance. CRMP2 was previously shown to mediate the repulsive effect of Sema3A on axons and to participate in axonal specification. The CRMPs appear to play a complex role in axon growth as well as microtubule dynamics and axon induction. CRMPs localize to the lamellipodia and filopodia of axonal growth cones, suggesting a role in axon guidance. Moreover, CRMP2 is upregulated after axotomy, and appears to increase the formation of axon-type processes from hippocampal neurons. CRMP2 has been reported to bind tubulin dimers directly and modulate microtubule assembly. CRMPs have also been implicated in the pathogenesis of a paraneoplastic neurologic syndrome. Interaction studies have implicated phospholipase D2 (PLD2), the cytosolic tyrosine kinase Fes, and intersectin in CRMP function. Hyperphosphorylation of CRMP2 is an early event in the progression of Alzheimer's disease.

Function:
Plays a role in neuronal development and polarity, as well as in axon growth and guidance, neuronal growth cone collapse and cell migration. Necessary for signaling by class 3 semaphorins and subsequent remodeling of the cytoskeleton (By similarity). Plays a role in neuron projection morphogenesis.

Subunit:
Homotetramer, and heterotetramer with CRMP1, DPYSL3, DPYSL4 or DPYSL5 (By similarity). Interacts through its C-terminus with the C-terminus of CYFIP1/SRA1. Interacts with HTR4 (By similarity). Interacts with CLN6.

Subcellular Location:
Cytoplasm.

Tissue Specificity:
Ubiquitous.

Post-translational modifications:
3F4, a monoclonal antibody which strongly stains neurofibrillary tangles in Alzheimer disease brains, specifically labels DPYSL2 when phosphorylated on Ser-518, Ser-522 and Thr-509.
Phosphorylation at Thr-514 by GSK3B abolishes tubulin-binding leading to destabilization of microtubule assembly in axons and neurodegeneration (By similarity). Phosphorylation by DYRK2 at Ser-522 is required for subsequent phosphorylation by GSK3B.

Similarity:
Belongs to the DHOase family. Hydantoinase/dihydropyrimidinase subfamily.

Database links:

Entrez Gene: 1808 Human

Entrez Gene: 12934 Mouse

Entrez Gene: 25416 Rat

Omim: 602463 Human

SwissProt: Q16555 Human

SwissProt: O08553 Mouse

SwissProt: P47942 Rat

Unigene: 173381 Human

Unigene: 593187 Human

Unigene: 352648 Mouse

Unigene: 475100 Mouse

Unigene: 2889 Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

CRMP2 是一种脑特异性蛋白，对于轴突生长和轴突-树突发育起到很重要的作用，CRMP2 通过与微管蛋白二聚体结合并促进微管的组装来调控轴突的生长和分支。