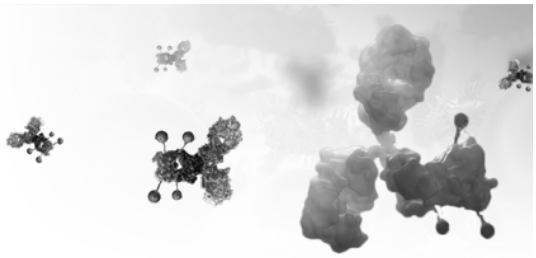

Mouse Anti-KIF2A monoclonal antibody, clone 3C23.D2 (CABT-RM179)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Detects Kinesin-like protein KIF2A in murine species.
Target	KIF2A
Immunogen	T7-tagged full-length mouse recombinant Kinesin-like protein KIF2A.
Isotype	IgG, κ
Source/Host	Mouse
Species Reactivity	Mouse
Clone	3C23.D2
Purification	Protein G purified
Conjugate	unconjugated
Applications	IHC, WB
Molecular Weight	79.75 kDa calculated.
Format	Liquid
Size	100 µg
Buffer	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl
Preservative	0.05% sodium azide
Storage	Stable for 1 year at 2-8°C from date of receipt.

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BACKGROUND

Introduction	Kinesin-like protein KIF2A is encoded by the Kif2a gene in murine species. KIF2A is a member of the Kinesin-13 family that acts as a central regulator of the microtubule cytoskeleton in neurons. Proteins in this family include KIF2A, KIF2B, KIF2C/ MCAK, and KIF24. KIF2A acts as an ATP-dependent microtubule destabilizer and regulates cell migration, axon elongation, and pruning in the developing nervous system. KIF2A is highly phosphorylated in the brain and has many phosphorylation sites (Thr186/Thr187; Thr439/Ser440/Ser441, Ser470 and Ser488) that are shown to be specific targets of p21-activated kinase 1 (PAK1). Phosphorylation is reported to transform normal KIF2A into accelerating KIF2A (A-KIF2A) or braking KIF2A (B-KIF2A) that regulate microtubule dynamics and neuron morphology in response to extracellular signals. It has been shown that brain-derived neurotrophic factor (BDNF) stimulates PAK1 and CDK5 kinases, which can reduce microtubule polymerization activity of KIF2A via B-type phosphorylation. This results in enhanced outgrowth of neural processes. On the other hand, lysophosphatidic acid (LPA) can induce ROCK2 kinase activity that suppresses neurite outgrowth from round cells via A-type phosphorylation.
Keywords	KIF2A; kinesin heavy chain member 2A; KIF2, kinesin heavy chain member 2; kinesin-like protein KIF2A; HK2; kinesin-2; Kinesin, heavy chain, 2; KIF2

GENE INFORMATION

Entrez Gene ID	16563
UniProt ID	P28740

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