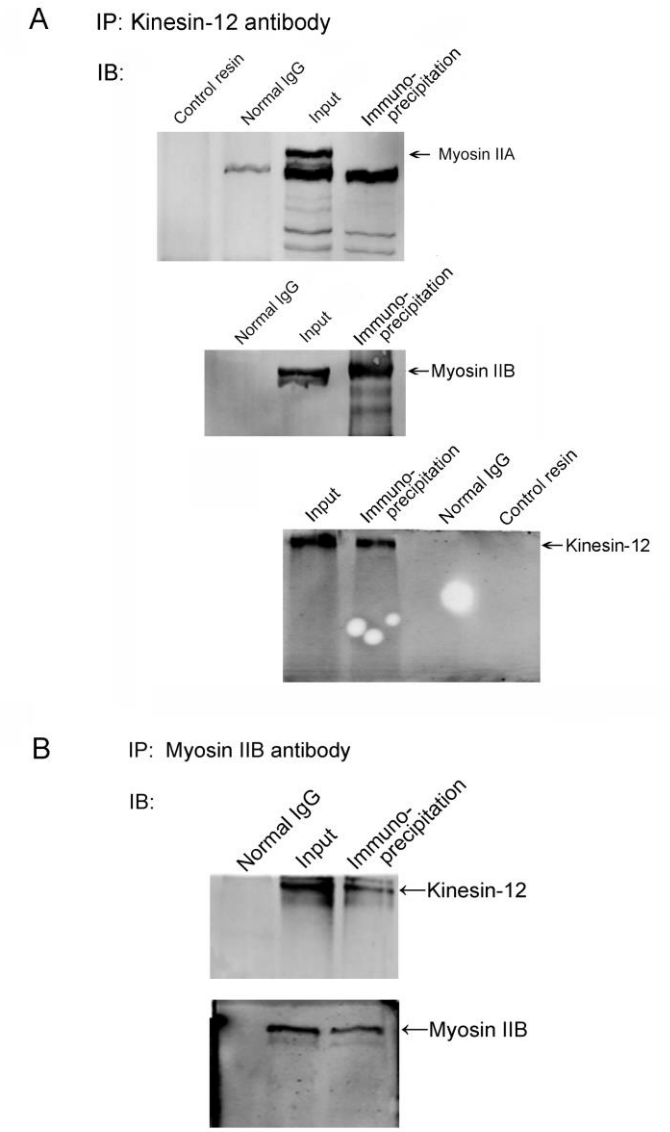
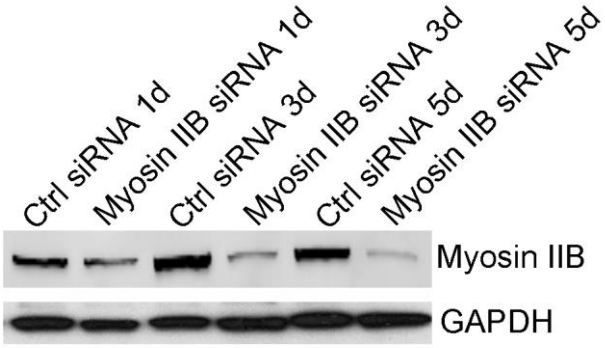


S1: Figures of complete Western blots of Co-IP

Panel A, results of Co-IP show that nonmuscle myosin heavy chain, myosin-IIB exists in the complex pulled down by kinesin-12 antibody, but myosin-IIA does not exist in that complex. The bottom panel shows the blot for kinesin-12.

Panel B, results of Co-IP show that kinesin-12 exists in the complex pulled down by myosin-IIB antibody. The bottom panel shows the blot for Myosin-IIB.



S2: Results of effects of Myosin IIB siRNA treatment in astrocytes for 1 d, 3 d, and 5 d were detected by Western blotting

Western blot showing levels of Myosin IIB in cultured astrocytes transfected with control siRNA (Ctrl siRNA) and Myosin IIB siRNA for 1 d, 3 d and 5 d. The bottom panel shows the blot for GAPDH, which was used as a loading control.

Table S1. The sequences of primers for qRT-PCR, plasmid constructs and siRNA used in this study

Gene name	sequence (5′→3′)
Kinesin-12 qRT-PCR sense	agacacccaaggaaatgtgagccag
Kinesin-12 qRT-PCR antisense	gctgataagccttggttggagtgg
GAPDH qRT-PCR sense	ccatcactgccactcagaagact
GADPH qRT-PCR antisense	acattgggggtaggaacacg
Kinesin-5 qRT-PCR sense	acacttgtgagaactgaacc
Kinesin-5 qRT-PCR antisense	cacggctcttgacttacg
Kinesin-12 Full length sense	ccg *ctcgag* atggctcctggctgcaaat
Kinesin-12 Full length antisense	tcc *ccgcgg* ttctttttttcctttctttcaaaaat
Myosin-IIB Full length sense	c*gaagctc* atggcccagagaactggactgg
Myosin-IIB Full length antisense	ggg*gtaccg*tttccgactggggtggctgtgt
Myosin-IIA Full length sense	g*gaattc* atggcccagcaggctgca
Myosin-IIA Full length antisense	gg *ggtaccg*tctcggtcgccttggcatca
Ctrl siRNA sense	uucuccgaacgugucacguTT
Ctrl siRNA antisense	acgugacacguucggagaaTT
Kinesin-12 siRNA sense	cagccauaauugcaaauguTT
Kinesin-12 siRNA antisense	acauuugcaauuauggcugTT’
Kinesin-5 siRNA sense	cugaaaggcugcagauguuTT
Kinesin-5 siRNA antisense	aacaucugcagccuuucagTT
Myosin IIB siRNA sense	cuauucaggacucaucuauTT
Myosin IIB siRNA antisense	auagaugaguccugaauagTT
GST-Kinesin-12 sense	cg *ggatcc*aatgttgacagactagaacaccattc
GST-Kinesin-12 antisense	ccg *ctcgag* ctctagttgttttctcagcatttcc
His-myh10-1 sense	acgc *gtcgac* aa cctctcctccaagtgacccg

Gene name	sequence (5′→3′)
His-myh10-1 antisense	ccc *aagctt* c ctgaaggctgttcttctcctcc
His-myh10-2 sense	cg *ggatcc* aacagccttcaggagcagca
His-myh10-2 antisense	acgc *gtcgac* c ttccgactggggtggctgt
His-myh10-3 sense	acgc *gtcgac* aa atgcaagcgcacattcagg
His-myh10-3 antisense	ccc *aagctt* c gcgaagctgcttgatcacttc
Kinesin-12-asp-mutant-sense	ctgctcctgagtatccacagagtccaaaag(a)a(c)c(a)ccaccccatttt caa
Kinesin-12-ala-mutant-antisense	ttgaaaatggggtgggtcttttggactctgtggatactcaggagcag
Kinesin-12-ala-mutant-sense	tgagtatccacagagtccaaaag(a)caccaccccatt
Kinesin-12-ala-mutant-antisense	aatggggtggtgcttttggactctgtggatactca

Note: Letters in italics plus underline are induced Restriction enzyme recognized site. Letters in brackets are wild-type sequence of kinesin-12 gene.