

Table S6. Values of the slopes obtained from the linear regressions and R^2 values for the Myosin Va shRNA- and Myosin Vc shRNA-transfected cells.

MyoVa shRNA		
Trajectory	Slope ($\mu\text{m/s}$)	R^2
1	0.1	0.95
2	0.14	0.98
3	0.16	0.98
4	0.13	0.97
5	0.1	0.97
6	0.11	0.95
7	0.15	0.94
8	0.14	0.99
9	0.1	0.97
10	0.15	0.98
11	0.12	0.89
12	0.13	0.95
13	0.12	0.86
14	0.12	0.97
15	0.13	0.99
16	0.12	0.97
17	0.21	0.96
Mean	0.13	
s.d.	0.03	

MyoVc shRNA		
Trajectory	Slope ($\mu\text{m/s}$)	R^2
1	0.04	0.94
2	0.09	0.98
3	0.08	0.97
4	0.08	0.98
5	0.09	0.95
6	0.07	0.98
7	0.08	0.98
8	0.04	0.99
9	0.07	0.98
10	0.05	0.99
11	0.07	0.98
12	0.08	0.97
13	0.05	0.97
14	0.06	0.98
15	0.1	0.93
16	0.06	0.99
17	0.09	0.96
Mean	0.07	
s.d.	0.02	

Group	Mean	s.d.	n	df	t^*	P
MyoVa shRNA	0.13	0.03	17	16	7.55	$P < 0.0001$
MyoVc shRNA	0.07	0.02	17			