Kif 1ANM_004321+Kif 1BNM_015074+Kif 1CNM_006612+Kif 2ANM_016338++Kif 2CNM_006845++Kif 3BNM_004798++Kif 3CNM_002254+Kif 4NM_004521+Kif 5DAB011103+Kif 9NM_182902+Kif 11NM_004523+Kif 13ANM_015254+Kif 14NM_012210+Kif 15NM_022113+Kif 18NM_015254+Kif 18NM_01217+Kif 20ANM_005733+Kif 22NM_007317+Kif 23NM_138555+Kif 23NM_005550+Kif C3NM_005550+KLC1NM_201521+	Name	Identifier	RT-PCR	Immunofluorescence	WB
Kif 1BNM_015074+Kif 1CNM_006612+Kif 2ANM_016338++Kif 2CNM_006845++Kif 3BNM_004798++Kif 3CNM_002254+Kif 4NM_012310+Kif 5BNM_004521+Kif 5CAB011103+Kif 9NM_182902+Kif 11NM_004523+Kif 13ANM_015254+Kif 14NM_0122113+Kif 15NM_020242+Kif 16NM_020242+Kif 17NM_020816-aKif 20ANM_005733+Kif 22NM_138555+Kif 23NM_138555+Kif 23NM_005550+Kif C3NM_005550+KLC1NM_020552+KLC4NM_201521+	Kif 1A	NM_004321	+		
Kif 1CNM_006612+Kif 2ANM_016338++Kif 2CNM_006845++Kif 3BNM_004798++Kif 3CNM_002254+Kif 4NM_012310+Kif 5BNM_004521+Kif 5CAB011103+Kif 9NM_182902+Kif 11NM_004523+Kif 13ANM_015254+Kif 13BNM_015254+Kif 15NM_020242+Kif 15NM_020242+Kif 18NM_031217+Kif 20ANM_005733+Kif 23NM_138555+Kif 23NM_005550+Kif C3NM_005550+KLC1NM_005552+KLC4NM_201521+	Kif 1B	NM_015074	+		
Kif 2ANM_016338++Kif 2CNM_006845++Kif 3BNM_004798++Kif 3CNM_002254+Kif 4NM_012310+Kif 5BNM_004521+Kif 5CAB011103+Kif 9NM_182902+Kif 11NM_004523+Kif 13ANM_022113+Kif 13BNM_015254+Kif 14NM_0124875+Kif 15NM_020242+Kif 17NM_020816-°Kif 20ANM_005733+Kif 22NM_138555+Kif 23NM_138555+Kif 23NM_005550+Kif C3NM_005550+KLC1NM_201521+	Kif 1C	NM_006612	+		
Kif 2CNM_006845++Kif 3BNM_004798+++Kif 3BNM_002254++Kif 3CNM_002254++Kif 4NM_012310++Kif 5BNM_004521++Kif 5CAB011103++Kif 9NM_182902+-Kif 11NM_004523+-Kif 13ANM_022113+-Kif 13BNM_015254+-Kif 14NM_012475+-Kif 15NM_020242+Kif 17NM_020816-°Kif 20ANM_005733+Kif 22NM_007317+Kif 23NM_138555+Kif 23NM_005550+Kif C3NM_005550+KLC1NM_005552+KLC4NM_201521+	Kif 2A	NM_016338	+		+
Kif 3B NM_004798 + + + Kif 3C NM_002254 + + Kif 4 NM_012310 + + Kif 5B NM_004521 + + Kif 5C AB011103 + + Kif 11 NM_004523 + - Kif 13A NM_022113 + - Kif 13B NM_015254 + - Kif 14 NM_014875 + - Kif 15 NM_020242 + - Kif 17 NM_020816 -* + Kif 18 NM_01217 + + Kif 20A NM_005733 + + Kif 23 NM_138555 + + Kif 23 NM_005550 + + Ki	Kif 2C	NM_006845	+	+	
Kif 3C NM_002254 + Kif 4 NM_012310 + Kif 5B NM_004521 + + Kif 5C AB011103 + + Kif 9 NM_182902 + + Kif 11 NM_004523 + + Kif 13A NM_022113 + + Kif 13B NM_015254 + + Kif 14 NM_0120242 + + Kif 15 NM_020242 + + Kif 17 NM_020816 -°° + + Kif 18 NM_031217 + + + Kif 20A NM_005733 + + + Kif 22 NM_07317 + + + Kif 23 NM_13855 + + + Kif 23 NM_005550 + + + Kif C3 NM_005550 + + + KLC1 NM_201521 + + +	Kif 3B	NM_004798	+	+	+
Kif 4 NM_012310 + Kif 5B NM_004521 + + Kif 5C AB011103 + + Kif 9 NM_182902 + + Kif 11 NM_004523 + + Kif 13A NM_022113 + + Kif 13B NM_015254 + + Kif 14 NM_014875 + + Kif 15 NM_020242 + + Kif 17 NM_020242 + + Kif 18 NM_01217 + + Kif 20A NM_005733 + + Kif 22 NM_007317 + + Kif 23 NM_138555 + + Kif 23 NM_005550 + + Kif C3 NM_005550 + + KLC1 NM_201521 + +	Kif 3C	NM_002254	+		
Kif 5B NM_004521 + + Kif 5C AB011103 + + Kif 9 NM_182902 + + Kif 11 NM_004523 + + Kif 13A NM_0122113 + + Kif 13B NM_015254 + + Kif 13B NM_014875 + + Kif 15 NM_020242 + + Kif 17 NM_020242 + + Kif 18 NM_01217 + + Kif 20A NM_005733 + + Kif 22 NM_007317 + + Kif 23 NM_138555 + + Kif 26A AB033062 + + Kif C3 NM_005550 + + KLC1 NM_005552 + - KLC4 NM_201521 + -	Kif 4	NM_012310	+		
Kif 5C AB011103 + Kif 9 NM_182902 + Kif 11 NM_004523 + Kif 13A NM_015254 + Kif 13B NM_015254 + Kif 14 NM_014875 + Kif 15 NM_020242 + Kif 17 NM_020816 -a + Kif 18 NM_031217 + Kif 20A NM_005733 + Kif 22 NM_07317 + Kif 23 NM_13855 + Kif 23 NM_005550 + Kif C3 NM_005550 + KLC1 NM_201521 +	Kif 5B	NM_004521	+	+	
Kif 9NM_182902+Kif 11NM_004523+Kif 13ANM_022113+Kif 13BNM_015254+Kif 14NM_014875+Kif 15NM_020242+Kif 17NM_020816 $-^a$ ++Kif 18NM_031217+Kif 20ANM_005733+Kif 23NM_138555+Kif 26AAB033062+Kif C3NM_005550+KLC1NM_005552+KLC4NM_201521+	Kif 5C	AB011103	+		
Kif 11 NM_004523 + Kif 13A NM_022113 + Kif 13B NM_015254 + Kif 14 NM_014875 + Kif 15 NM_020242 + Kif 17 NM_020816 -a + + Kif 18 NM_031217 + + + Kif 20A NM_005733 + + + Kif 22 NM_007317 + + + Kif 23 NM_138555 + + + Kif 26A AB033062 + + + Kif C3 NM_005550 + + + KLC1 NM_201521 + + +	Kif 9	NM_182902	+		
Kif 13A NM_022113 + Kif 13B NM_015254 + Kif 14 NM_014875 + Kif 15 NM_020242 + Kif 17 NM_020816 -a + + Kif 18 NM_031217 + + + Kif 20A NM_005733 + + + Kif 22 NM_007317 + - - Kif 23 NM_138555 + - - Kif 26A AB033062 + - - Kif C3 NM_005550 + - - KLC1 NM_005552 + - - KLC4 NM_201521 + - -	Kif 11	NM_004523	+		
Kif 13B NM_015254 + Kif 14 NM_014875 + Kif 15 NM_020242 + Kif 17 NM_020816 -a + + Kif 17 NM_031217 + + + Kif 20A NM_005733 + + + Kif 22 NM_007317 + + + Kif 23 NM_138555 + + + Kif 26A AB033062 + + + Kif C3 NM_005550 + + + KLC1 NM_201521 + + +	Kif 13A	NM_022113	+		
Kif 14 NM_014875 + Kif 15 NM_020242 + Kif 17 NM_020816 -a + + Kif 17 NM_031217 + + + Kif 20A NM_005733 + + + Kif 22 NM_007317 + + + Kif 23 NM_138555 + + + Kif 26A AB033062 + + + Kif C3 NM_005550 + + + KLC1 NM_005552 + + + KLC4 NM_201521 + + +	Kif 13B	NM_015254	+		
Kif 15 NM_020242 + Kif 17 NM_020816 -a + + Kif 17 NM_031217 + + + Kif 20A NM_005733 + + + Kif 22 NM_007317 + + + Kif 23 NM_138555 + + + Kif 26A AB033062 + + + Kif C3 NM_005550 + + + KLC1 NM_005552 + + +	Kif 14	NM_014875	+		
Kif 17 NM_020816 -a + + Kif 18 NM_031217 + + Kif 20A NM_005733 + + Kif 22 NM_007317 + + Kif 23 NM_138555 + + Kif 26A AB033062 + + Kif C3 NM_005550 + + KLC1 NM_005552 + + KLC4 NM_201521 + +	Kif 15	NM_020242	+		
Kif 18 NM_031217 + Kif 20A NM_005733 + Kif 22 NM_007317 + Kif 23 NM_138555 + Kif 26A AB033062 + Kif C3 NM_005550 + KLC1 NM_005552 + KLC4 NM_201521 +	Kif 17	NM_020816	<u> </u>	+	+
Kif 20A NM_005733 + Kif 22 NM_007317 + Kif 23 NM_138555 + Kif 26A AB033062 + Kif C3 NM_005550 + KLC1 NM_005552 + KLC4 NM_201521 +	Kif 18	NM_031217	+		
Kif 22 NM_007317 + Kif 23 NM_138555 + Kif 26A AB033062 + Kif C3 NM_005550 + KLC1 NM_005552 + KLC4 NM_201521 +	Kif 20A	NM_005733	+		
Kif 23 NM_138555 + Kif 26A AB033062 + Kif C3 NM_005550 + KLC1 NM_005552 + KLC4 NM_201521 +	Kif 22	NM_007317	+		
Kif 26A AB033062 + Kif C3 NM_005550 + KLC1 NM_005552 + KLC4 NM_201521 +	Kif 23	NM_138555	+		
Kif C3 NM_005550 + KLC1 NM_005552 + KLC4 NM_201521 +	Kif 26A	AB033062	+		
KLC1 NM_005552 + KLC4 NM_201521 +	Kif C3	NM_005550	+		
KLC4 NM_201521 +	KLC1	NM_005552	+		
	KLC4	NM_201521	+		

Table S1. Expression of kinesin family members in HUVECs

Kinesin family members (KIFs) detected in HUVECs. KIF-specific primers were designed, and specificity was verified by BLAST analysis against the human genome. Total RNA was isolated from resting cultured HUVEC monolayers at passage 2 using the RNeasy kit (QIAGEN). cDNA was prepared by RT with Superscript II and oligo-dT (Invitrogen). Each kinesin was amplified by PCR using two sets of specific primers (Jaulin, F., X. Xue, E. Rodriguez-Boulan, and G. Kreitzer. 2007. *Dev. Cell.* 13:511–522). GAPDH or cyclofilin primers were used as controls. Out of the 41 human *KIFs*, the 30 shown in the table were routinely detected in HUVECs. Some of these could be detected by Western blot (WB) and immunofluorescence staining in HUVECs with a limited number of commercially available anti-KIF antibodies. The identifier is the nucleotide accession number (available from GenBank/EMBL/DDBJ). ^aPCR was negative for the following kinesins: Kif 5A, Kif 12, Kif 20A, Kif 21A, Kif 21B, Kif 27, and KLC2. PCR was also negative for Kif 17 despite positive immunofluorescence and Western blot.