

Human	1	MAM	SS	LQ	AR	LF	PGL	A	K	I	Q	R	S	N	G	L	I	H	S	A	N	V	R	T	V	N	L	E	K	S	C	V	S	V	E	W	A	E	G	G	A	T	K	G	K	E	I	D	F	D	V	A	A	I	N	P	E	L	68											
Mouse	1	-	-	-	M	E	S	L	H	A	R	L	F	P	G	L	S	I	N	I	Q	R	S	N	G	L	I	H	P	A	N	I	S	T	V	N	V	E	K	S	C	V	S	V	E	W	I	E	G	G	T	T	K	G	K	E	I	D	D	V	A	A	I	N	P	E	L	65		
Human	69	L	O	L	L	P	L	H	P	K	D	N	L	P	L	Q	E	N	V	T	I	Q	K	Q	R	R	S	V	N	S	K	I	P	A	P	K	E	S	L	R	S	R	S	T	R	M	S	T	V	S	E	L	R	I	T	A	Q	E	N	D	M	E	V	E	L	P	A	136		
Mouse	66	L	O	L	L	P	L	R	P	K	D	S	L	P	L	Q	E	N	V	T	V	P	K	Q	K	R	K	S	V	N	S	K	I	P	A	L	K	E	G	L	R	S	R	S	T	R	M	S	T	V	S	E	V	R	I	P	A	Q	E	N	D	M	E	V	E	L	P	V	133	
Human	137	A	N	S	R	K	Q	F	S	V	P	P	A	T	R	P	S	C	P	A	V	A	E	I	P	L	R	M	V	S	E	E	M	E	E	Q	V	H	S	I	R	G	S	S	S	A	N	P	V	N	S	V	R	R	K	S	C	L	V	K	E	V	E	K	M	K	N	K	204	
Mouse	134	T	N	S	R	K	Q	F	A	I	P	S	H	P	-	R	A	S	C	S	T	V	T	E	L	P	L	M	V	S	E	E	A	E	E	Q	A	H	S	T	R	S	T	S	S	A	N	P	G	N	S	V	R	R	K	S	C	I	V	K	E	M	E	K	M	K	N	K	200	
Human	205	R	E	E	K	A	Q	N	S	E	M	R	M	K	R	A	Q	E	Y	D	S	S	F	P	N	W	E	F	A	R	M	I	K	E	F	R	A	T	L	E	C	H	P	L	T	M	D	P	I	E	E	H	R	I	C	V	C	V	R	K	R	P	L	N	K	Q	E	272		
Mouse	201	R	E	E	K	R	A	Q	N	S	E	L	R	I	K	R	A	Q	E	Y	D	S	S	F	P	N	W	E	F	A	R	M	I	K	E	F	R	V	T	M	E	C	S	P	L	T	V	T	D	P	I	E	E	H	R	I	C	V	C	V	R	K	R	P	L	N	K	Q	E	268
Human	273	L	A	K	K	E	I	D	V	I	S	I	P	S	K	C	L	L	L	V	H	E	P	K	L	K	V	D	L	T	K	Y	L	E	N	Q	A	F	C	F	D	F	A	F	D	E	T	A	S	N	E	V	V	R	F	T	A	R	P	L	V	Q	T	I	F	E	G	340		
Mouse	269	L	A	K	K	E	I	D	V	I	S	V	P	S	K	C	L	L	L	V	H	E	P	K	L	K	V	D	L	T	K	Y	L	E	N	Q	A	F	C	F	D	F	A	F	D	E	T	A	S	N	E	V	V	R	F	T	A	R	P	L	V	Q	T	I	F	E	G	336		
Human	341	K	A	T	C	F	A	Y	G	Q	T	G	S	G	K	T	H	T	M	G	G	D	L	S	G	K	A	Q	N	A	S	K	G	I	Y	A	M	A	S	R	D	V	F	L	L	K	N	Q	P	C	Y	R	K	L	G	L	E	V	Y	T	F	F	E	I	Y	N	G	K	408	
Mouse	337	K	A	T	C	F	A	Y	G	Q	T	G	S	G	K	T	H	T	M	G	G	D	L	S	G	K	S	Q	N	A	S	K	G	I	Y	A	M	A	S	R	D	V	F	L	L	K	N	Q	P	R	Y	R	N	L	N	L	E	V	Y	T	F	F	E	I	Y	N	G	K	404	
Human	409	L	F	D	L	N	K	K	A	K	L	R	V	L	E	D	G	K	Q	Q	V	V	G	L	Q	E	H	L	V	N	S	A	D	D	V	I	K	M	I	D	M	G	S	A	C	R	T	S	G	Q	T	F	A	N	S	N	S	R	S	H	A	C	F	Q	I	476				
Mouse	405	V	F	D	L	N	K	K	A	K	L	R	V	L	E	D	S	R	Q	Q	V	V	G	L	Q	E	Y	L	V	T	C	A	D	D	V	I	K	M	I	N	M	G	S	A	C	R	T	S	G	Q	T	F	A	N	S	N	S	R	S	H	A	C	F	Q	I	472				
Human	477	I	L	R	A	K	G	R	M	H	G	K	F	S	L	V	D	L	A	G	N	E	R	G	A	D	T	S	S	A	D	R	Q	T	R	M	E	G	A	E	I	N	K	S	L	L	A	L	K	E	C	I	R	A	L	G	Q	N	K	A	H	T	P	F	R	E	S	K	L	544
Mouse	473	L	L	R	T	K	G	R	L	H	G	K	F	S	L	V	D	L	A	G	N	E	R	G	A	D	T	S	S	A	D	R	Q	T	R	M	E	G	A	E	I	N	K	S	L	L	A	L	K	E	C	I	R	A	L	G	Q	N	K	A	H	T	P	F	R	E	S	K	L	540
Human	545	T	Q	V	L	R	D	S	F	I	G	E	N	S	R	T	C	M	I	A	T	I	S	P	G	I	S	S	C	E	Y	T	L	N	T	L	R	Y	A	D	R	V	K	E	L	S	P	H	S	G	P	S	G	E	Q	L	I	Q	M	E	T	E	M	E	A	C	S	N	612	
Mouse	541	T	Q	V	L	R	D	S	F	I	G	E	N	S	R	T	C	M	I	A	M	I	S	P	G	I	S	S	C	E	Y	T	L	N	T	L	R	Y	A	D	R	V	K	E	L	S	P	H	S	G	P	S	G	E	Q	P	V	Q	M	E	T	E	V	M	E	A	S	S	N	608
Human	613	G	A	L	I	P	G	N	L	S	K	E	E	E	E	L	S	S	Q	M	S	S	F	N	E	A	M	T	Q	I	R	E	L	E	E	K	A	M	E	L	K	E	I	I	Q	Q	G	P	D	W	L	E	L	S	E	M	T	E	Q	P	D	Y	D	L	E	T	F	V	680	
Mouse	609	G	T	S	L	T	G	N	-	-	-	E	E	E	E	L	S	S	Q	M	S	S	F	N	E	A	M	T	Q	I	R	E	L	E	R	A	L	E	E	L	R	E	I	I	Q	Q	G	P	N	W	L	E	L	S	E	M	T	D	Q	P	D	Y	D	L	E	T	F	V	673	
Human	681	N	K	A	E	S	A	L	A	Q	-	-	-	Q	A	K	H	F	S	A	L	R	D	V	I	K	A	L	R	L	A	M	Q	L	E	E	Q	A	S	R	Q	I	S	S	K	R	P	Q	725																					
Mouse	674	N	K	A	E	S	A	L	T	Q	A	K	Q	A	K	H	F	S	A	L	R	E	V	I	K	A	L	R	L	A	M	Q	L	E	E	Q	A	S	K	Q	I	N	S	S	K	R	H	Q	721																					

Supplementary Figure S1. Comparison of KIF2C amino acid sequences between humans and mice.

Alignment of the amino acid sequences of human and mouse KIF2C was performed using Clustal Omega and Jalview.

Supplementary Table S1. Primers and gRNAs used in this study.

primer	sequence (5'-3')
<i>Kif2c</i> Fw #1	gccataaaaccttcccatca
<i>Kif2c</i> Fw #2	cagaaacagcatgagcagga
<i>Kif2c</i> Rv #1	tggcaaattgttgtccagaa
<i>Kif2c</i> Rv #2	ctgtccctggactcagaagg
<i>Kif2c</i> Fw for RT-PCR	aagaattcgccgcatggagtcgcttcacgcacgcc
<i>Kif2c</i> Rv for RT-PCR	aagatatcttggtgccgttcttgctg
<i>Actb</i> Fw for RT-PCR	catccgtaaagacctctatgccaac
<i>Actb</i> Rv for RT-PCR	atggagccaccgatccaca

gRNA	target sequence (5'-3')
<i>Kif2c</i> gRNA #1	gcactggtgacgtttaggg
<i>Kif2c</i> gRNA #2	ctggtggaaacctcgctgcg