

Table S1. **PCR primers used in this study**

Oligo	Sequence	Purpose
1	5'-CACGGATCCACCAAAGTGAGAGACATTAATAAG-3'	Forward primer for amplification of Mps1 ORF
2	5'-CACGCGGCCGCTCATTTTTTCCCCTTTTTTCAAAG-3'	Reverse primer for amplification of Mps1 ORF
3	5'-GAAGAAGCAGATAACCAGACCCTGGACAGCTATCGGAACGAAATAGC-3'	Forward mutagenic primer for RNAi resistance
4	5'-GCTATTCGTTCCGATAGCTGTCCAGGGTCTGGTTATCTGCTTCTC-3'	Reverse mutagenic primer for RNAi resistance
5	5'-GGAATGCTAAAGCTAATTGCCTTTGGGATTGCAAACC-3'	Forward mutagenic primer for D664A mutation
6	5'-GGTTTGCAATCCCAAAGGCAATTAGCTTTAGCATTCC-3'	Reverse mutagenic primer for D664A mutation
7	5'-GTACATCTACATGGTAGCGGAGTGTGAAATATTG-3'	Forward mutagenic primer for M602A mutation
8	5'-CAATATTCCACACTCCGCTACCATGTAGATGTAC-3'	Reverse mutagenic primer for M602A mutation

Table S2. **shRNA sequences used in this study**

Oligo	Sequence
A	5'-CCATCTTTTCATTCCCGAGC-3'
B	5'-TACAGTCAAGCAATTGAAGCG-3'
C	5'-TCAAGAGCCAGATGATGCAC-3'
D	5'-TTCTTCAAAAAGCTGTAGAAC-3'
E	5'-TTCAAATCACTGGCAGATTCC-3'
F	5'-CCAAACTCTTGATAGTTACCG-3'

Table S3. **Antibodies used in this study**

Antibody	Description	Dilution	Source
SB1.3	Sheep anti-Bub1	1:1,000	Taylor et al., 2001
SB3.2	Sheep anti-Bub3	1:1,000	Unpublished data
SBR1.1	Sheep anti-BubR1	1:1,000	Taylor et al., 2001
SMP1.1	Sheep anti-Mps1	1:1,000	This study
SAB.1	Sheep anti-aurora B	1:1,000	Girdler et al., 2006
SCF.1	Sheep anti-Cenp-F	1:800	Hussein and Taylor, 2002
SM2.2	Sheep anti-Mad2	1:500	Johnson et al., 2004
5F9	Mouse anti-BubR1	1:50	Taylor et al., 2001
Cenp-E	Rabbit anti-Cenp-E	1:2,000	Provided by D. Cleveland ^a
ACA	Human anticentromere	1:500	Provided by B. Earnshaw ^b
9B10	Mouse anti-Mad1	1:500	Abcam
Cy2, Cy3, and Cy5 anti-sheep/-mouse/ -rabbit/-human	Conjugated secondaries	1:500	Jackson ImmunoResearch Laboratories

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