

Table S1. PCR Primers, Related to Experimental Procedures

Name	Sequence	Description
Primer a	GATAGCTGACAAAGATAACTC	<i>Rnase2b</i> ^{E202X} multiplex PCR genotyping (WT product 221 bp, mutant product 420 bp; see Figure 1) ¹
Primer b	CTGTCCATCTGCACGAGACT	
Primer c	CCTGGAAACCTGACCACC	
p53forw	GTGGTGGTACCTTATGAGCC	<i>p53</i> multiplex PCR genotyping (WT product 642 bp, mutant product 510 bp) ²
p53rev1	CAAAGAGCGTTGGGCATGTG	
p53rev2	CATCGCCTTCTATCGCCTTC	
GTBforw	GACCTGGGCAGACAGTGAAT	<i>Rnase2b</i> ^{tm1a} multiplex PCR genotyping (WT product 448 bp, mutant product 519 bp) ¹
GTBrev1	CCACAACGGGTTCTTCTGTT	
GTBrev2	GAGCCAGCTGAGGACTCAAG	
Probe-F	TTAGAAGCAGCAAGTGAGC	PCR amplification of ~400 bp Southern probe (see Figure 1)
Probe-R	CAAGGACTTGCAGAATGTAG	
Arml-F	GTCTAGCTCAATGATTCACAAG	For ES cell genotyping, detecting correct targeting of <i>Rnase2b</i> ^{E202X} (see Figure 1)
Arml-R	CCCGGTAGAATTCGACG	
Arml-F	ATCGCATTGTCTGAGTAGGTG	ES cell genotyping, detecting correct targeting of <i>Rnase2b</i> ^{E202X} (see Figure 1)
Arml-R	TGCCAGGTGCCAATCACAG	
Rnaseh2b-F	AAGTACAGCTCAGAGAAGACATTGAA	Rnaseh2b qPCR
Rnaseh2b-R	CTTTTAGTGCCACCACAGTTTG	
Actb-F	CTAAGGCCAACCGTGAAG	β -Actin qPCR
Actb-R	ACCAGAGGCATACAGGGACA	
Cdkn1a -F	TCCACAGCGATATCCAGACA	Cdkn1a/p21 qPCR
Cdkn1a -R	GGACATCACCAGGATTGGAC	
Ccng1-F	TTAGTAGGCCTGTCGGATCG	Cng1/Cyclin G1 qPCR
Ccng1-R	AGCAGTTTCTGAGAGTCAGTTGTC	

¹PCR program: 95°C 2 min; then 30 cycles of 94°C 45 s, 58°C 45 s and 72°C 45 s; then 72°C 5 min

²PCR program: 95°C 5min; then 3 cycles of 94°C 30 s, 65°C 30 s and 72°C 45 s; then 3 cycles of 94°C 30 s, 62°C 30 s and 72°C 45 s; then 3 cycles of 94°C 30 s, 59°C 30 s and 72°C 45 s; then 35 cycles of 94°C 30 s, 56°C 30 s and 72°C 45 s; then 72°C 10 min

Table S2. Antibody Reagents, Related to Experimental Procedures

Antigen	Antibody/ Clone Name	Host Species	Dilution	Applications	Source
Actin	A2066	Rabbit	1:2,000	WB ¹	Sigma
β -catenin	15B8	Mouse	1:500	IF ² , f-IHC ³	Sigma
Ki67	TEC-3	Rat	1:50	IF, f-IHC	Dako
p21	F-5	Mouse	1:100	WB	Santa Cruz
PAR	4336-APC	Rabbit	1:2,000	WB	Trevigen
Phospho-Histone H3 (Ser10)	06-570	Rabbit	1:5,000	WB	Millipore
Phospho-Histone H2A.X (Ser139)	2577	Rabbit	1:50	IF, f-IHC	Cell Signaling Technology
Phospho-Histone H2A.X (Ser139) (20E3) Alexa 488 Conjugate	9719	Rabbit	1:50	IF, f-IHC	Cell Signaling Technology
RNASEH2A	TA306706	Rabbit	1:1,000	WB	Origene
mouse RNase H2 complex ⁴	62	Rabbit	1:100-500	IF, f-IHC, WB	See Experimental Procedures
human RNase H2 complex ⁴	7	Sheep	1:100-500	WB	See Experimental Procedures
Secondary antibody reagents					
α -Mouse IgG, HRP-conjugated		Goat	1:5,000	WB	Dako
α -Rabbit IgG, HRP-conjugated		Goat	1:5,000	WB	Cell Signaling Technology
α -Sheep IgG, HRP-conjugated		Rabbit	1:2,000	WB	Dako
Alexa 488, 594 or 647-conjugated α -Mouse IgG		Donkey	1:400	IF, f-IHC	Molecular Probes
Alexa 488-conjugated α -Rat IgG		Donkey	1:250	IF, f-IHC	Molecular Probes
Alexa 488, 594 or 647-conjugated α -Rabbit IgG		Donkey	1:400	IF, f-IHC	Molecular Probes

¹WB = Western Blotting

²IF = Immuno-fluorescence

³f-IHC = Fluorescent Immunohistochemistry

⁴Polyclonal antibodies were raised against recombinant mouse and human RNase H2 complexes, purified as previously described (Reijns et al., 2011), and affinity purified.