

**Supplementary Table 1:** PCR primer sets to genotype the various transgenes and genetically engineered alleles as well as to determine Flp and Cre-mediated recombination events.

Transgene / Allele	Primer #	Sequence (5' - 3')	bp
MMTV-Flp	2546	CCT GGA ACG GCA TCA TCA GC	275
	2128	CTC CCA TTC ATC AGT TCC ATA GG	
	2127	AGT GAT AGA GCT CTT GCC TAG C	570
	2525	CGT TGT AAG GGA TGA TGG TGA ACT	
<i>Jak1<sup>fl/wt</sup></i>	2614	CCA TCA GCA CTA GCT GAG GTT C	285 (fl-neo)
	( <i>Flp</i> recombined)	2615	CAC AAT GTA GCA AGA CCA AGC CAT G
<i>Jak1<sup>fl(-neo)null</sup></i>	2717	GTA ACT AGC AGA AGG TCT GAT CTG	>900 (fl-neo)
	( <i>Flp+Cre</i> recombined, null)	2615	CAC AAT GTA GCA AGA CCA AGC CAT G
CAG-LSL-GFP	2004	GGC TCT AGA GCC TCT GCT AAC C	~270
	2211	GCC ATT GGG ATA TAT CAA CGG TG	
MMTV-neu	1259	TTT CCT GCA GCA GCC TAC GC	590
	1260	CGG AAC CCA CAT CAG GCC	
<i>Rosa26<sup>CAG-FSF-GFP</sup></i>	2729	CCC AAA GTC GCT CTG AGT TGT TAT C	550 (wt)
	2730	GAA GGA GCG GGA GAA ATG GAT ATG	350 (mu)
	2731	CCA GGC GGG CCA TTT ACC GTA AG	
<i>FSF-Kras<sup>G12D</sup></i>	2528	CAC CAG CTT CGG CTT CCT ATT	270 (wt)
	2529	AGC TAA TGG CTC TCA AAG GAA TGT A	350 (mu)
	2530	GCG AAG AGT TTG TCC TCA ACC	
<i>Kras<sup>G12D</sup></i>	2600	GTC TTT CCC CAG CAC AGT GCA G	310 (wt)
	( <i>Flp</i> recombined)	2602	GTT TTG TAG CAG CTA ATG GCT CTC
<i>Trp53<sup>R172H</sup></i>	2598	AGC CTG CCT AGC TTC CTC AGG	290 (wt)
	2599	CTT GGA GAC ATA GCC ACA CTG	330 (mu)
<i>Rosa26<sup>CAG-FSF-CreERT2</sup></i>	2534	GAA TGT GCC TGG CTA GAG ATC	190
	2535	GCA GAT TCA TCA TGC GGA	
<i>Rosa26<sup>CAG-FSF-CreERT2</sup></i>	2729	CCC AAA GTC GCT CTG AGT TGT TAT C	550 (wt)
	2730	GAA GGA GCG GGA GAA ATG GAT ATG	~420 (mu)
	2731	CCA GGC GGG CCA TTT ACC GTA AG	
<i>Rosa26<sup>CAG-CreERT2</sup></i>	2723	GTT CGG CTT CTG GCG TGT	490
	( <i>Flp</i> recombined)	2724	CGA TCC CTG AAC ATG TCC ATC

**Supplementary Table 2:** Primary and secondary antibodies for immunofluorescent staining.

<b>Primary Antibodies</b>	<b>SOURCE</b>	<b>IDENTIFIER</b>	<b>DILUTION</b>
α-GFP	Avēs Labs	GFP-1020	1:1000
α-CK8	Developmental Studies Hybridoma Bank	TROMAI	1:100
α-CK14	Covance	PRB-155P	1:1000
α-E-cadherin	Cell Signaling	#3195	1:200
α-N-cadherin	Cell Signaling	#14215	1:200
pSTAT3	Cell Signaling	#9145S	1:100
<b>Secondary Antibodies</b>	<b>SOURCE</b>	<b>IDENTIFIER</b>	<b>Dilution</b>
Alexa Fluor 488 goat anti-chicken	Invitrogen	A11039	1:1000
Alexa Fluor 488 donkey anti-rat	Invitrogen	A21208	1:1000
Alexa Fluor 594 goat anti-rat	Invitrogen	A11007	1:1000
Alexa Fluor 594 goat anti-rabbit	Invitrogen	A11012	1:1000
Alexa Fluor 594 donkey anti-rabbit	Invitrogen	A21207	1:200-1000
Alexa Fluor 488 donkey anti-rabbit	Invitrogen	A21206	1:1000
Alexa Fluor 594 goat anti-mouse	Invitrogen	A11005	1:1000

**Supplementary Table 3:** Primary and secondary antibodies for immunoblotting.

<b>Primary Antibodies</b>	<b>SOURCE</b>	<b>IDENTIFIER</b>	<b>DILUTION</b>
α-JAK1	Cell Signaling	#50996	1:1000
α-pSTAT3	Cell Signaling	#9145S	1:1000
α-STAT3	Cell Signaling	#9139	1:1000
α-GAPDH	Cell Signaling	#5174S	1:2000
<b>Secondary Antibodies</b>	<b>SOURCE</b>	<b>IDENTIFIER</b>	<b>DILUTION</b>
HRP-conjugated goat anti-rabbit	R&D Systems	HAF008	1:2000
Digital anti-Mouse-HRP	KwikQuant	R1005	1:2000

# Raw Images of PCR gels or Immunoblots

Figure 1C

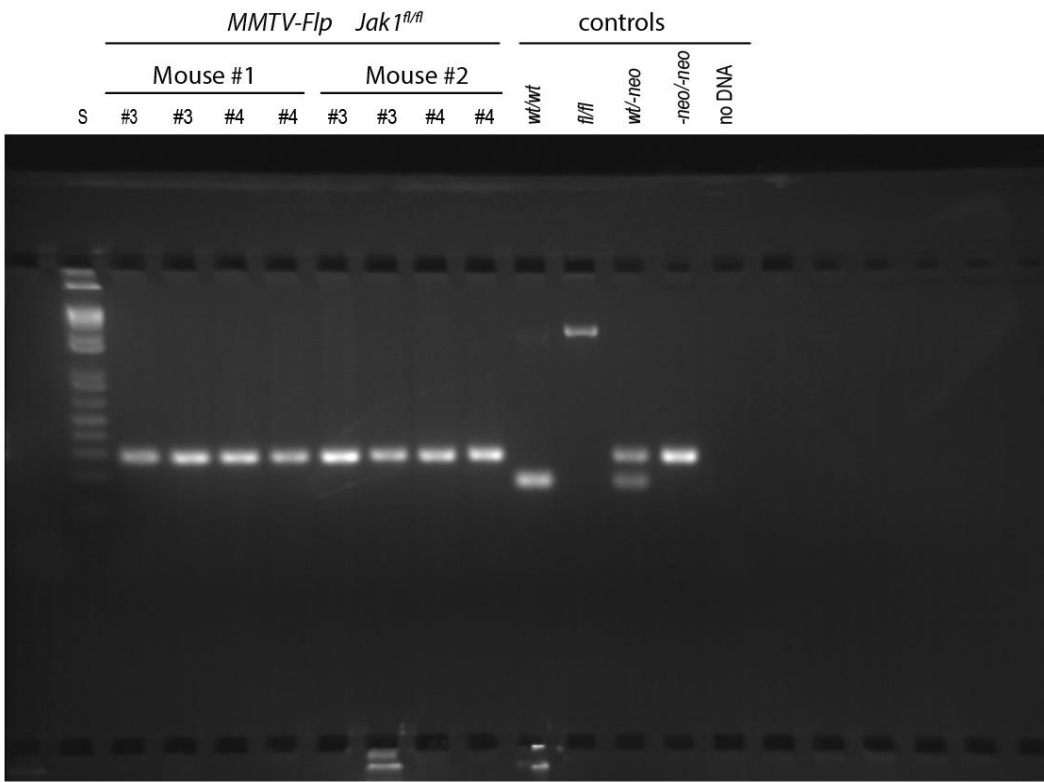
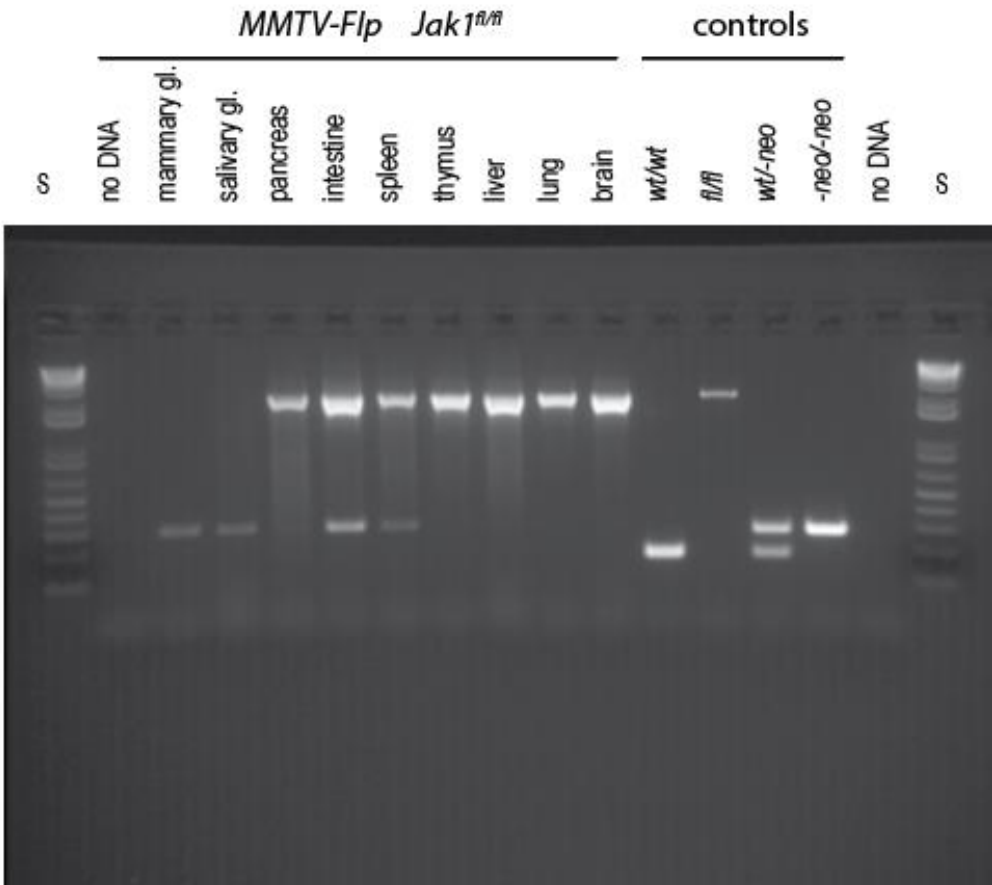
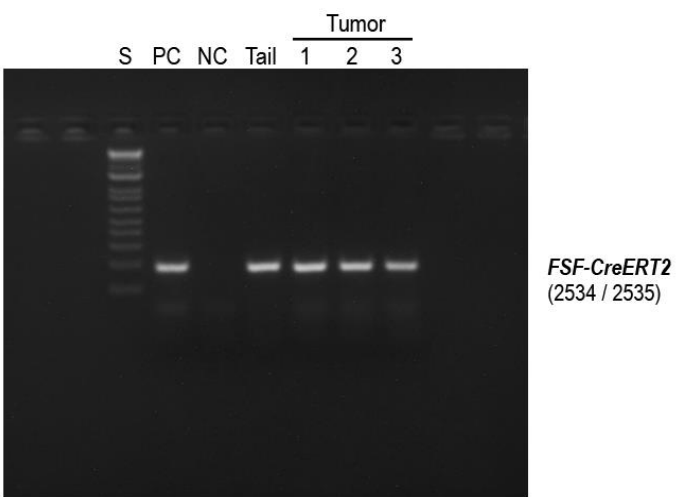
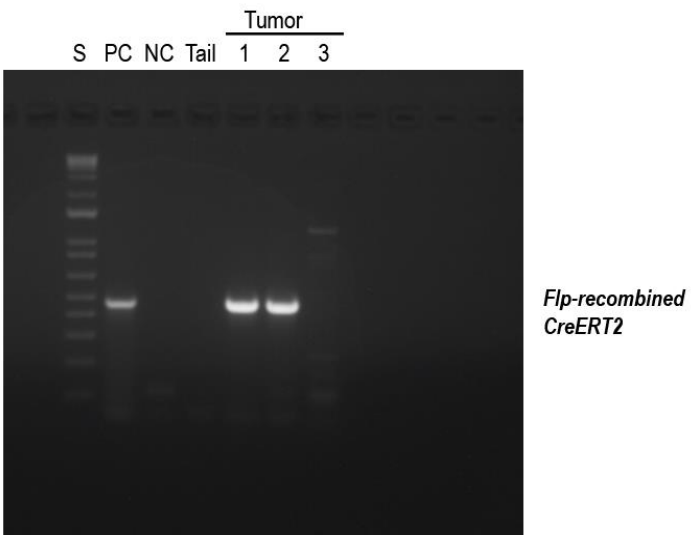
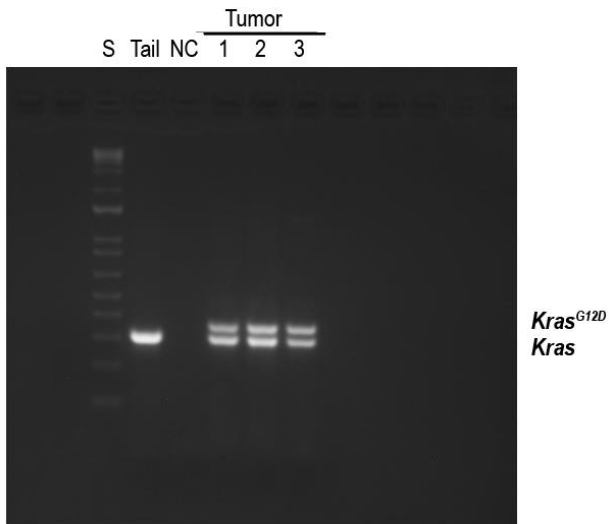


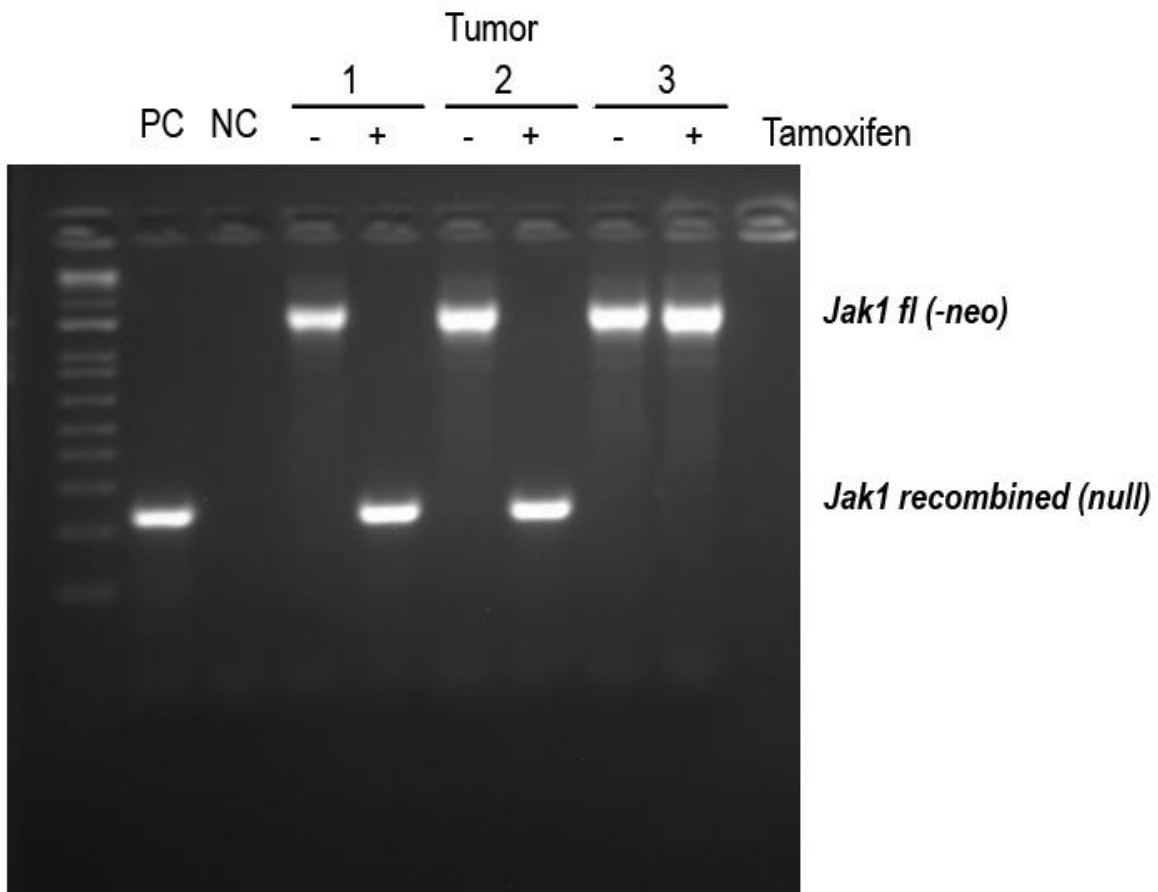
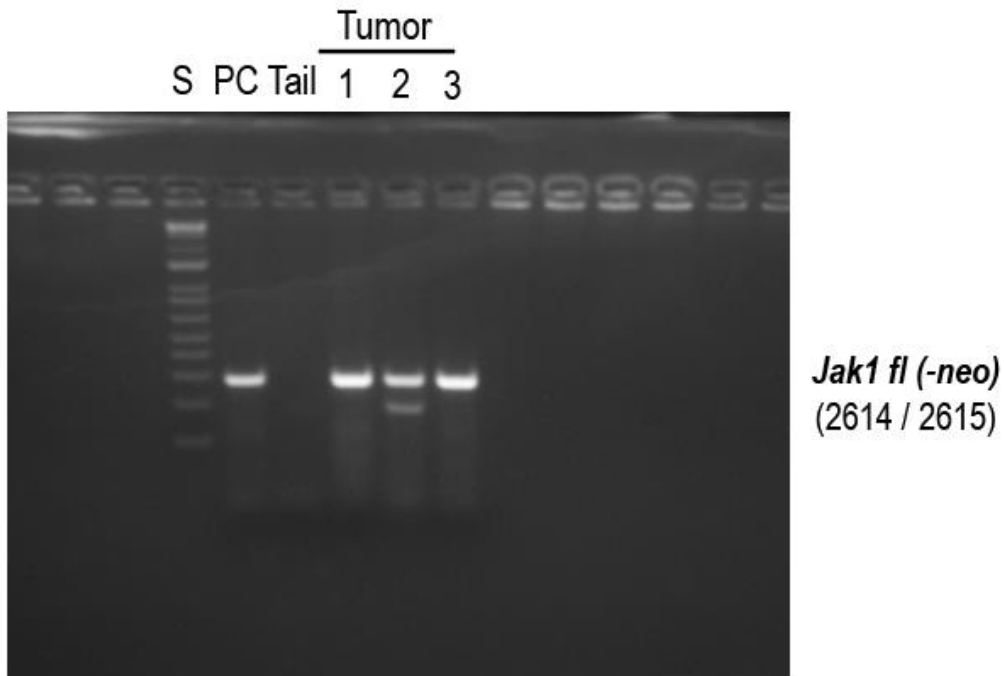
Figure 1D



**Figure 7A**



**Figure 7B**



**Figure 7C**

