

Supplemental Materials

1. Supplemental Figure 1 (RT-PCR results of 39 MIR exons in 10 human tissues).

In each gel figure, solid arrows show sequencing confirmed MIR exon inclusion forms. Hollow arrows show sequencing confirmed MIR exon skipping forms. Dashed arrows show sequencing confirmed non-specific PCR products.

2. Supplemental Figure 2 (Putative splice site signals within consensus sequences of antisense MIR, AluJo, and AluSx).

A. antisense MIR. B. antisense AluJo. C. antisense AluSx. X-axis, positions of putative splice sites within the consensus sequence. Y-axis, splice site scores calculated by MAXENT (see Materials and Methods). Black circle, 5' splice sites. Red triangle, 3' splice sites. Only putative splice sites with a score of higher than 0 are shown.

3. Supplemental Figure 3 (RT-PCR results of 9 MIR exons in fibroblast cells of humans, chimpanzees, rhesus macaques, marmosets and mouse kidney).

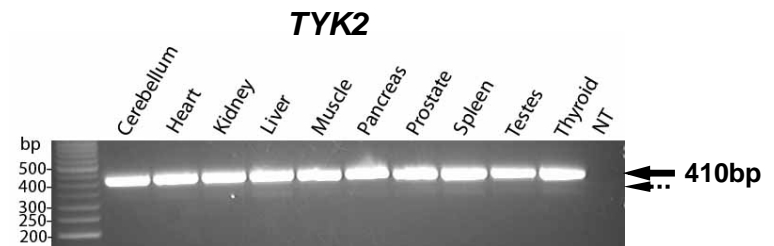
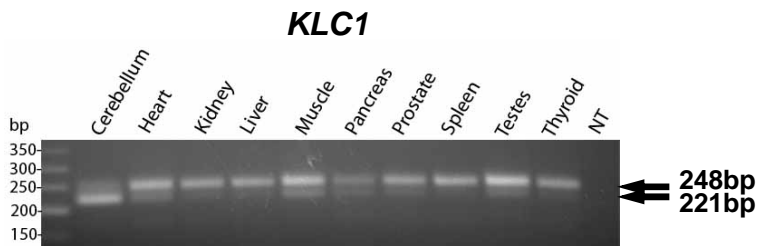
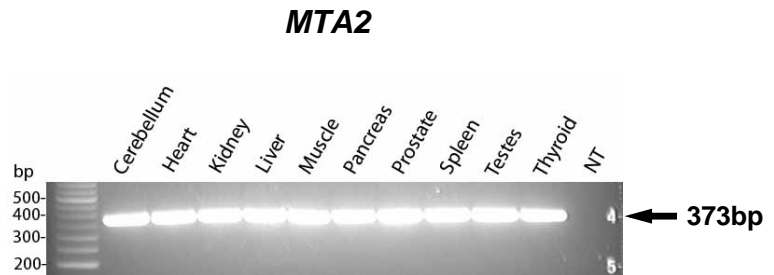
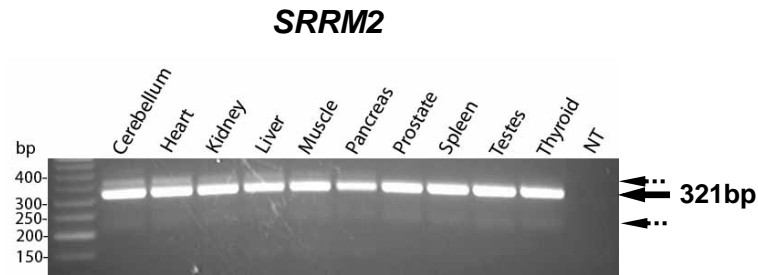
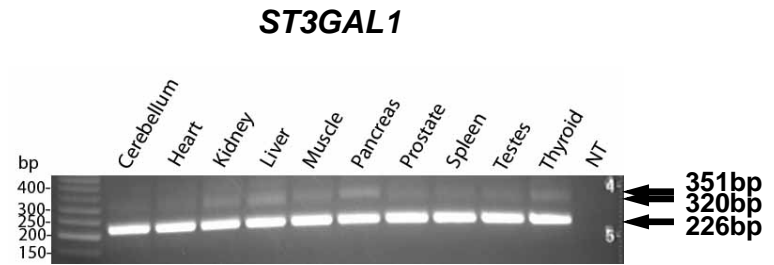
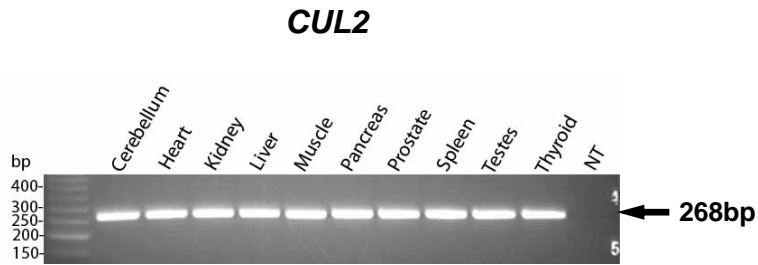
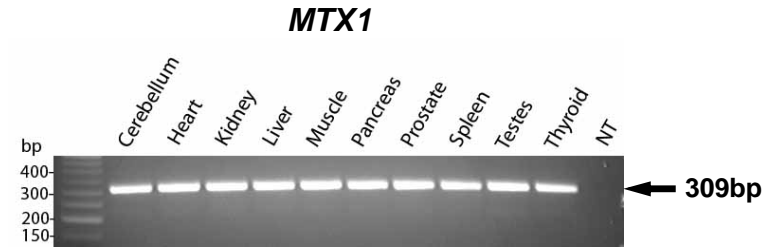
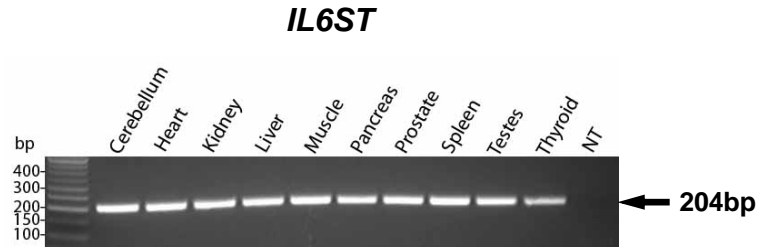
In each gel figure, exon inclusion forms and exon skipping forms are denoted as * and ^ respectively.

4. Supplemental Table 1 (List of primers for RT-PCR analysis of 39 MIR exons in 10 human tissues).

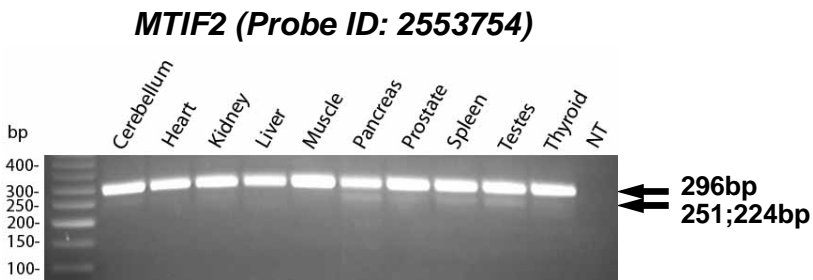
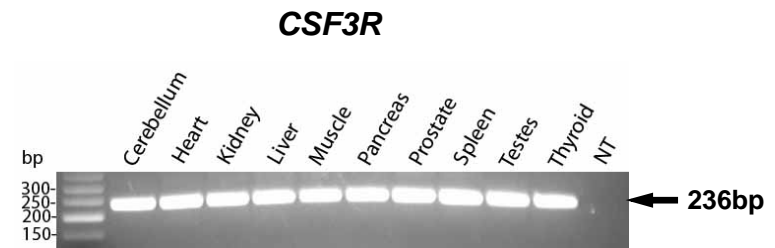
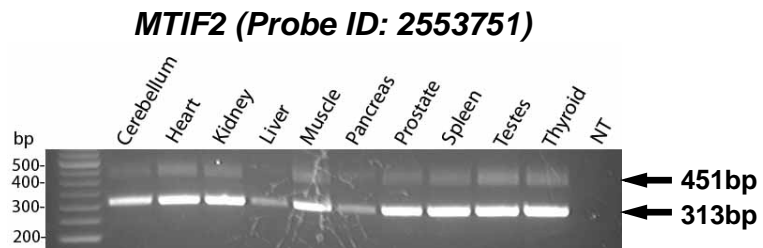
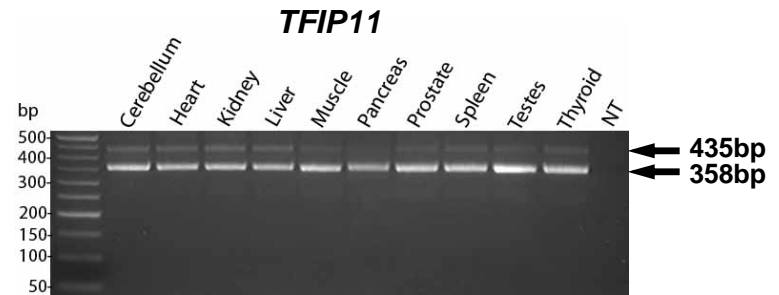
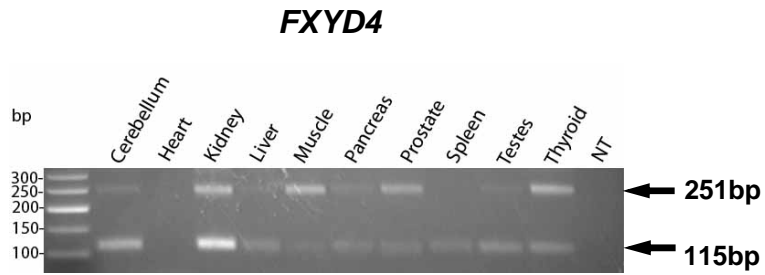
5. Supplemental Table 2 (List of primers for RT-PCR analysis of 9 MIR exons in chimpanzees, rhesus macaques, marmosets and mice).

Figure S1

Constitutive Exons

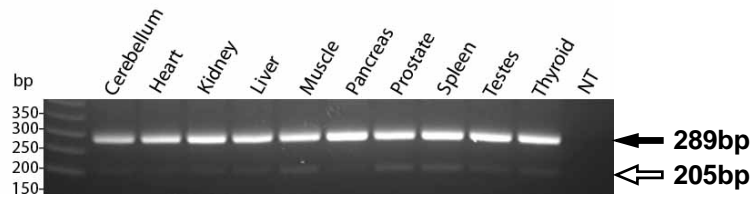


Constitutive Exons

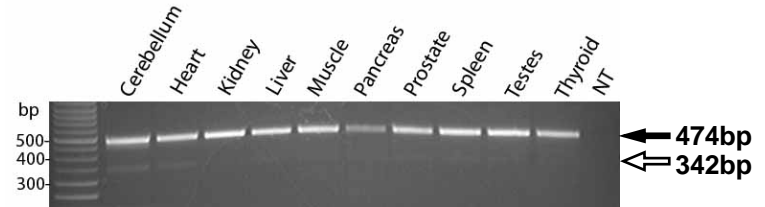


Alternative Major Exons

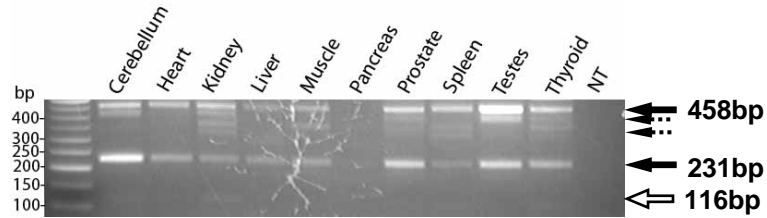
NUMB



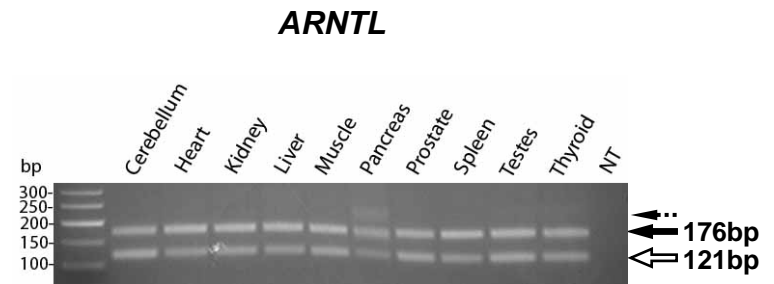
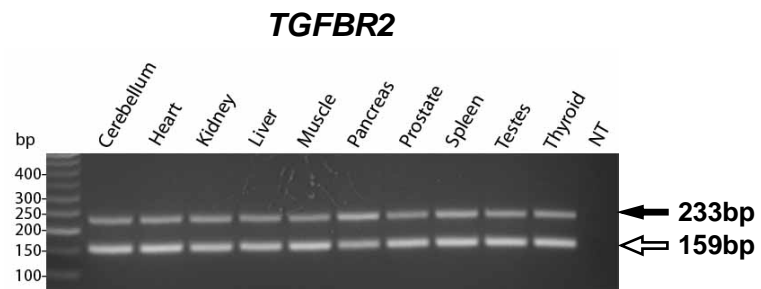
C12orf52



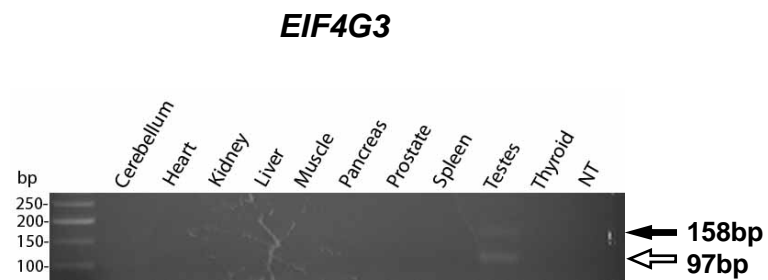
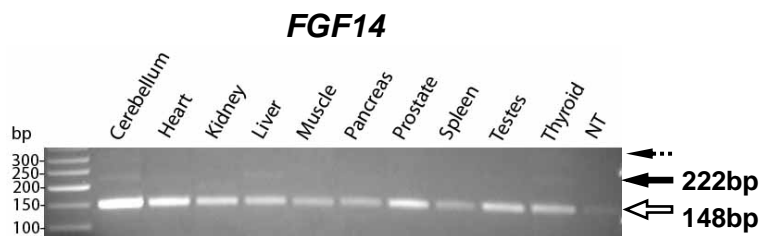
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Alternative Medium Exons

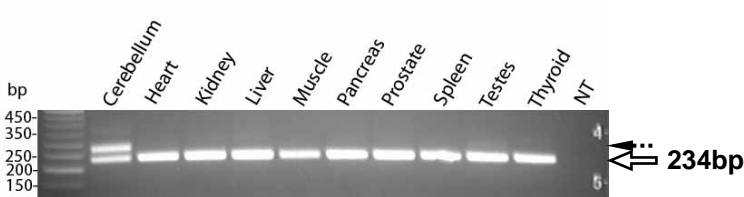


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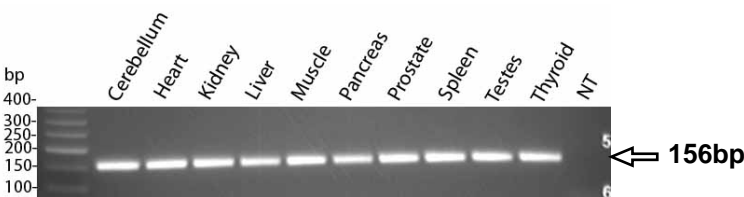


No Inclusion

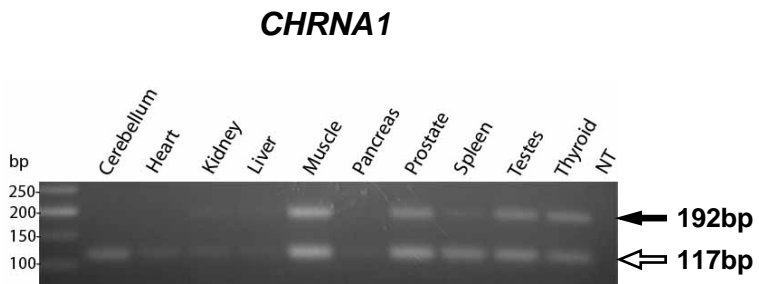
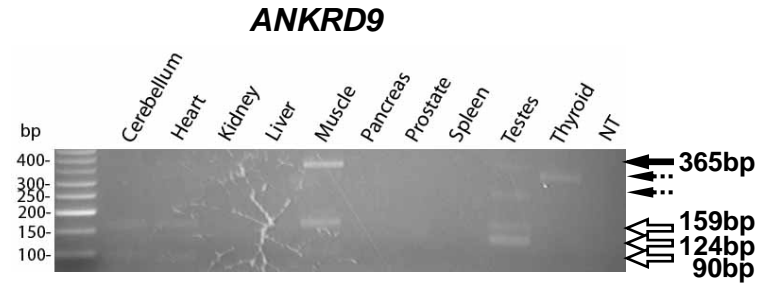
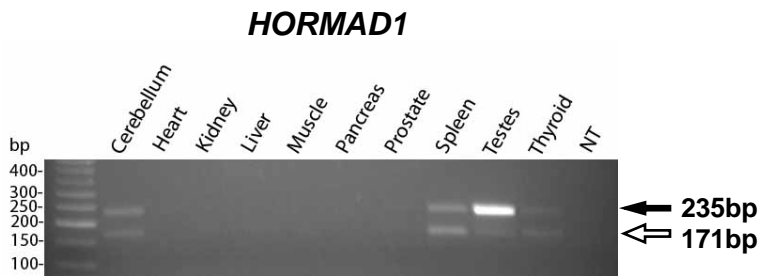
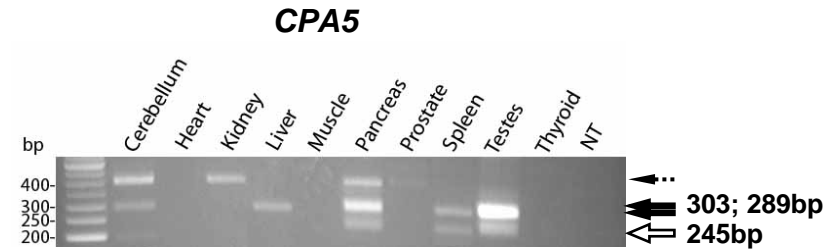
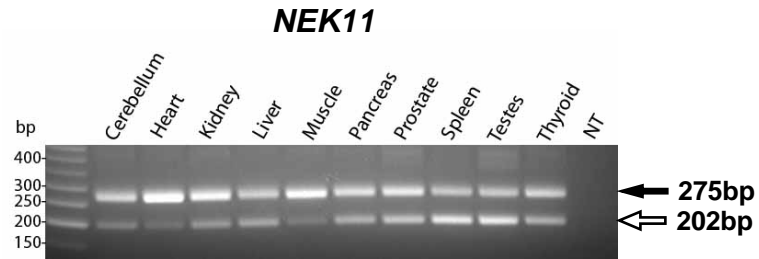
MYO18A



VWF

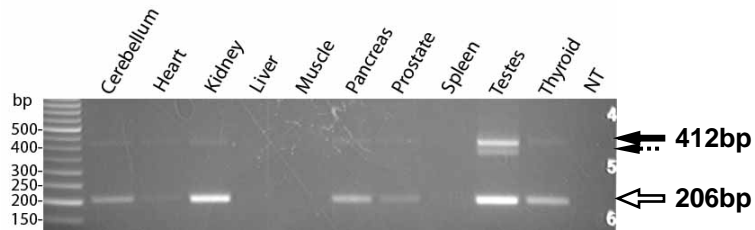


Tissue Specific Shift in Alternative Splicing

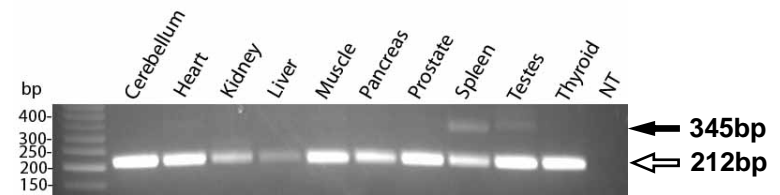


Tissue Specific Shift in Alternative Splicing

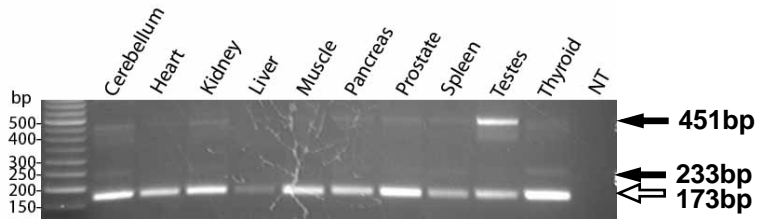
TLL6



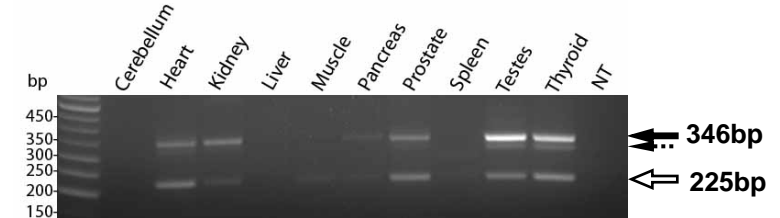
IL16



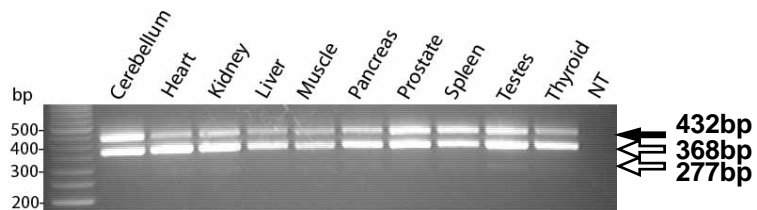
WSCD2



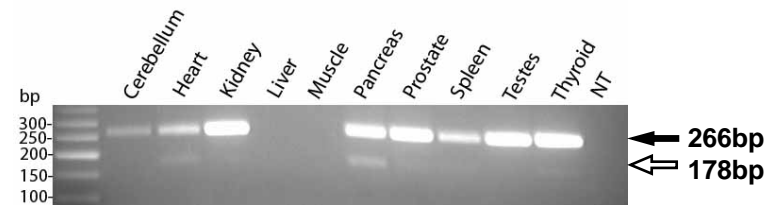
INPP5J



TUSC3



MUC15



RGAG1

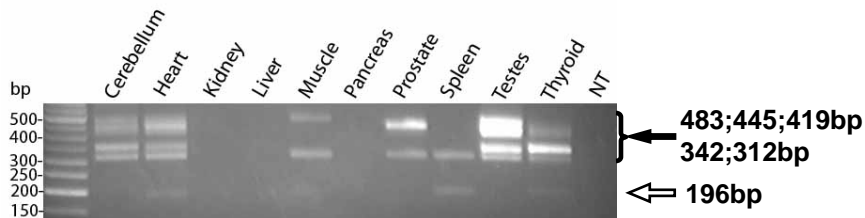


Figure S2

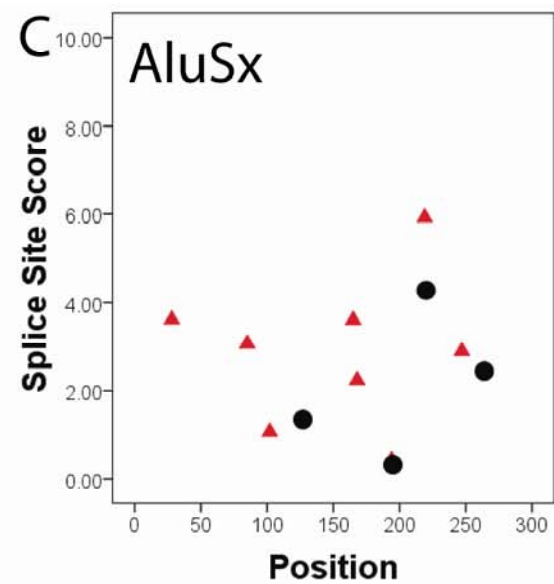
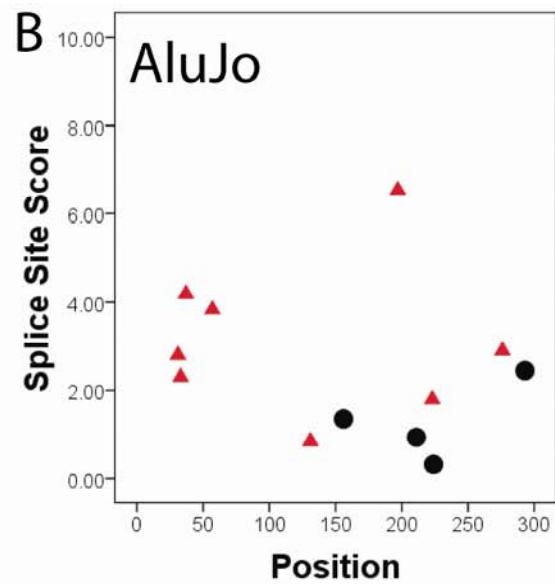
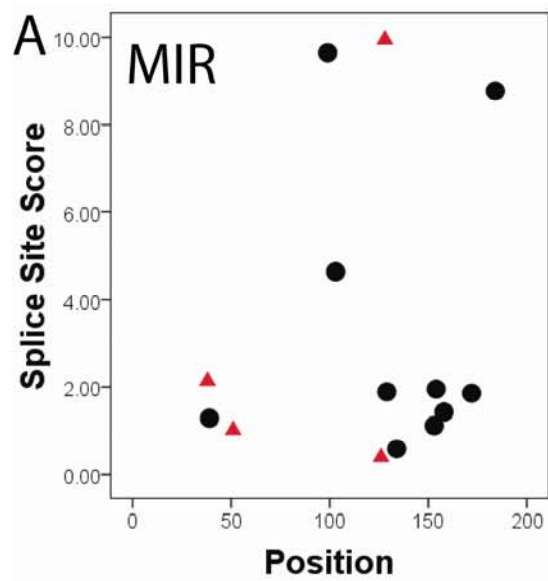
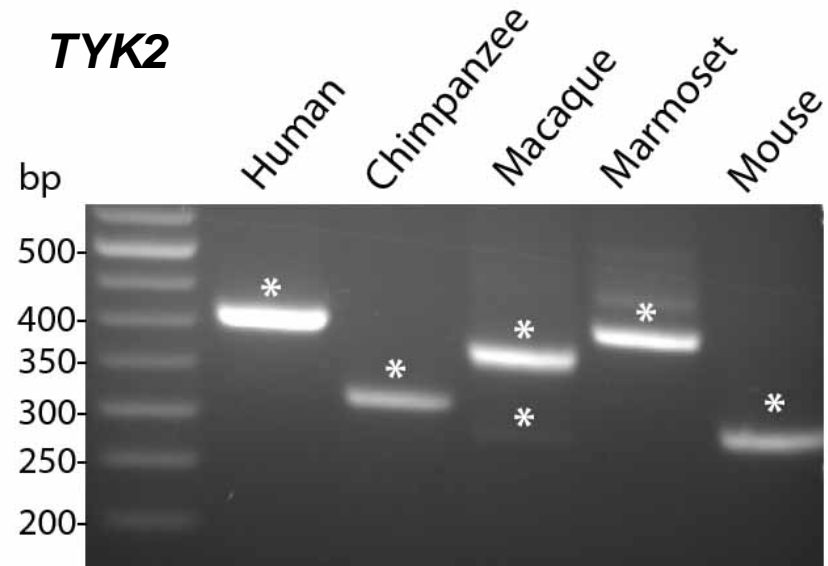
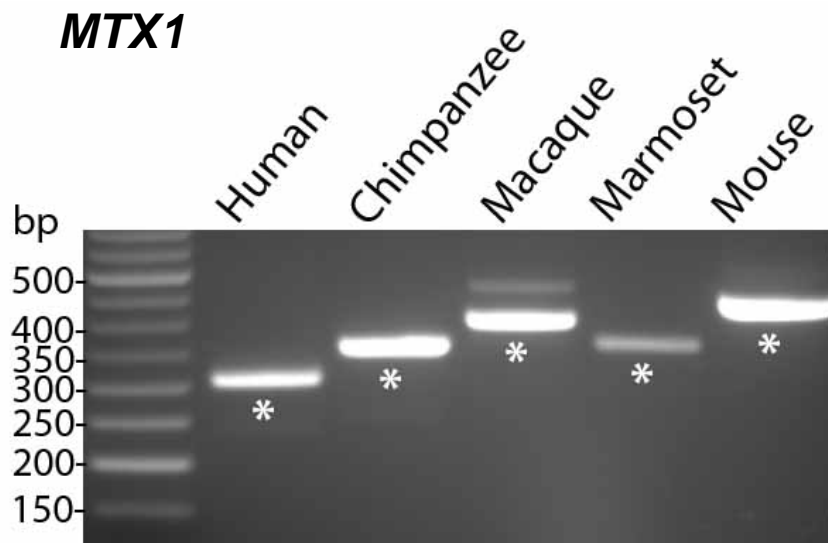
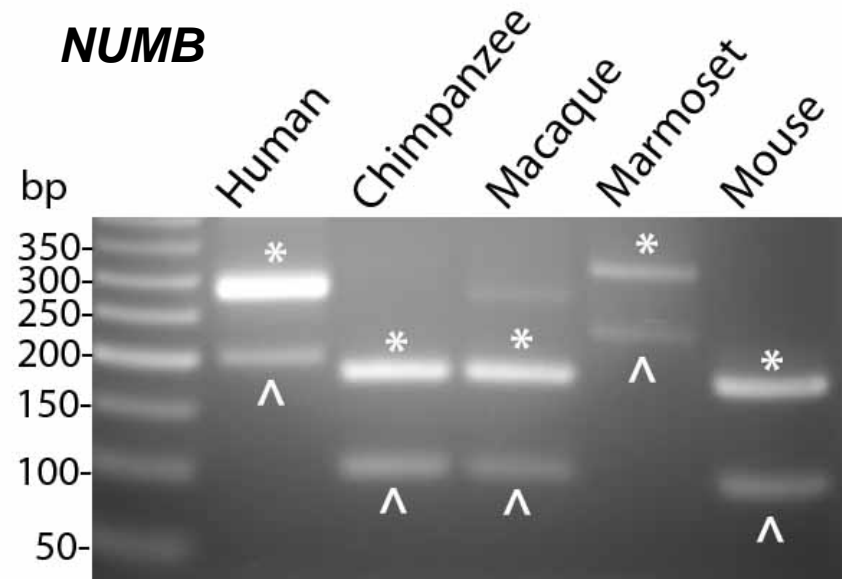
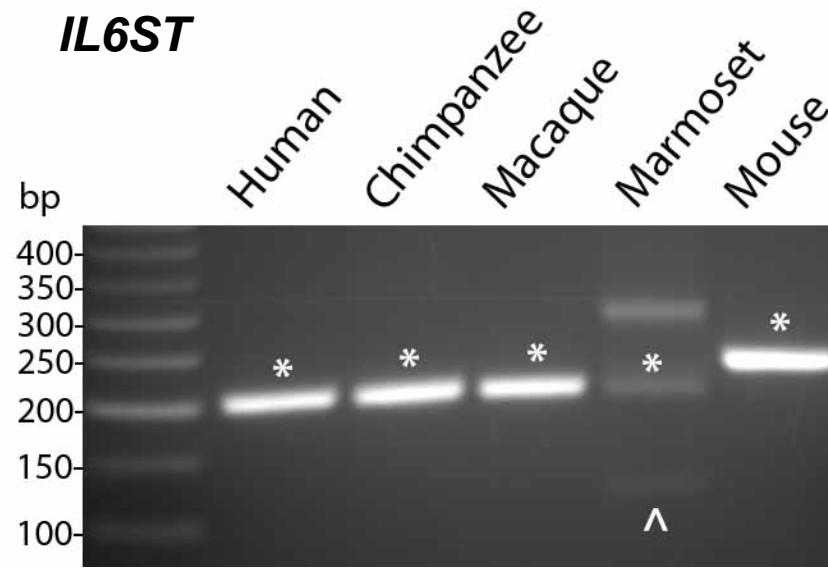
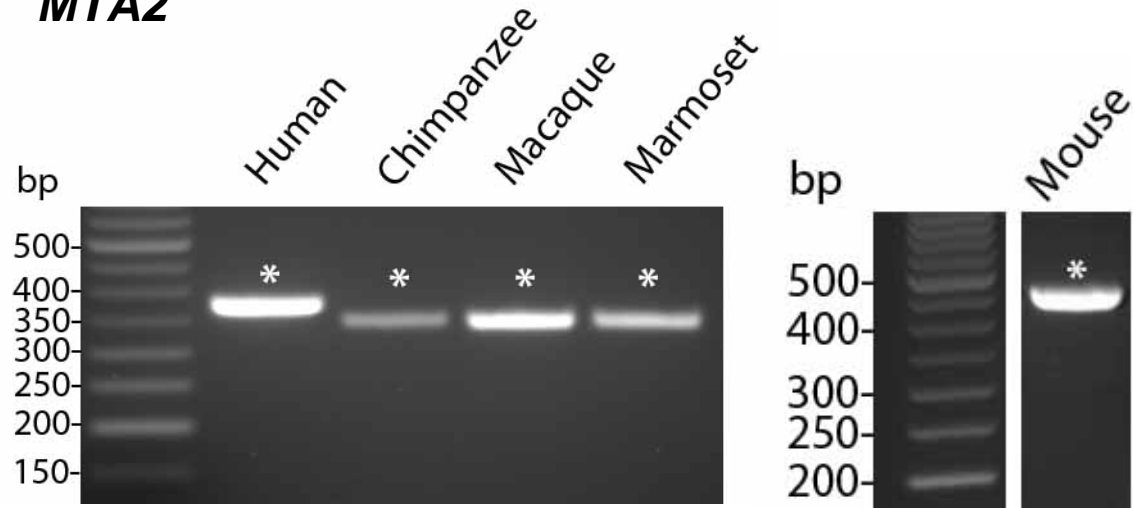


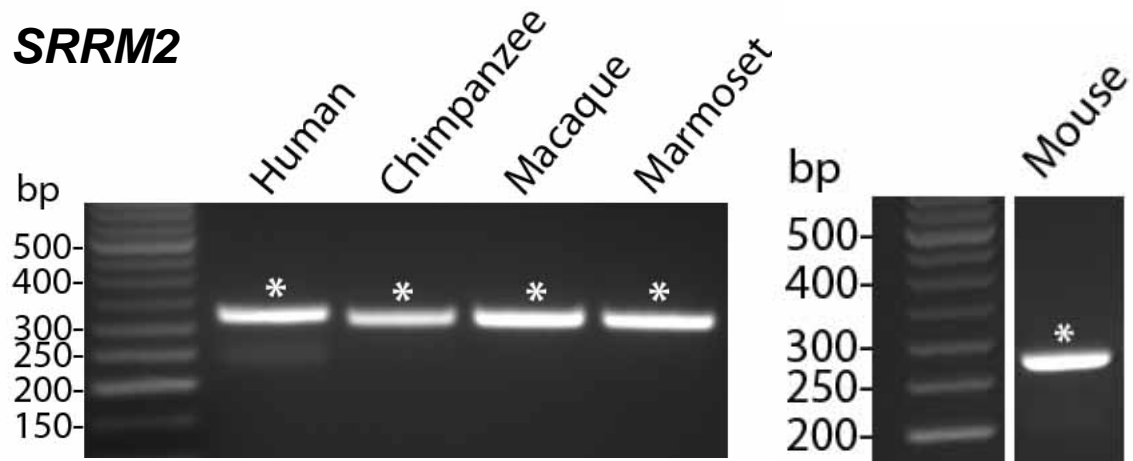
Figure S3



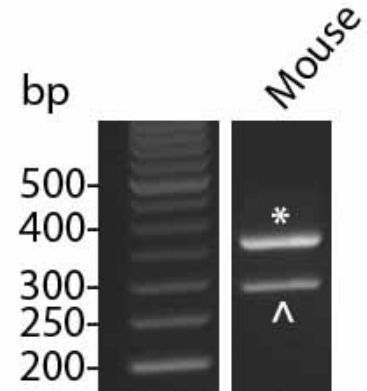
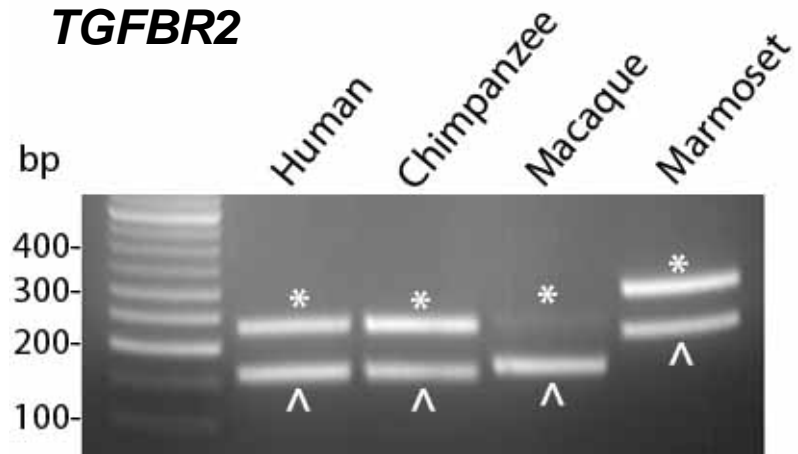
MTA2



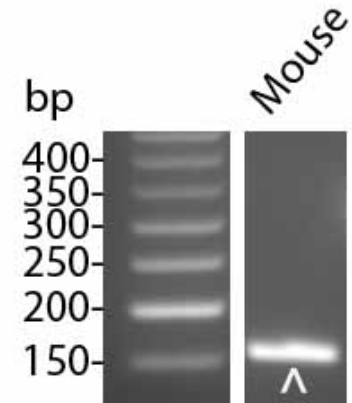
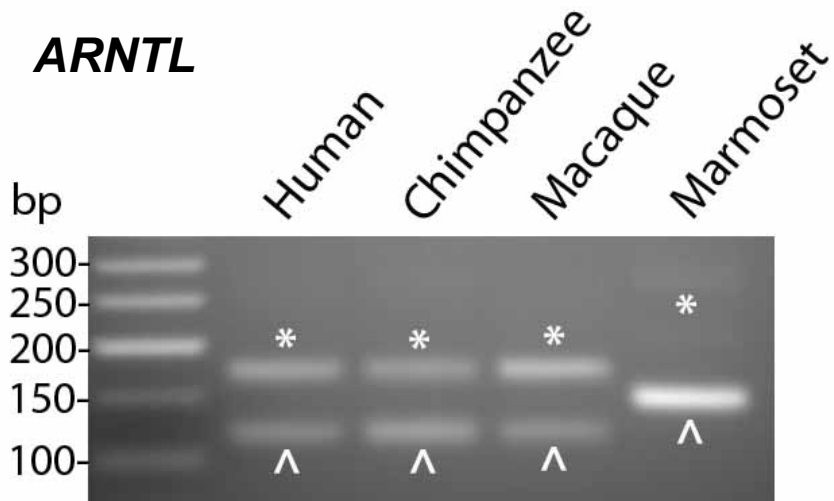
SRRM2



TGFBR2



ARNTL



CUL2

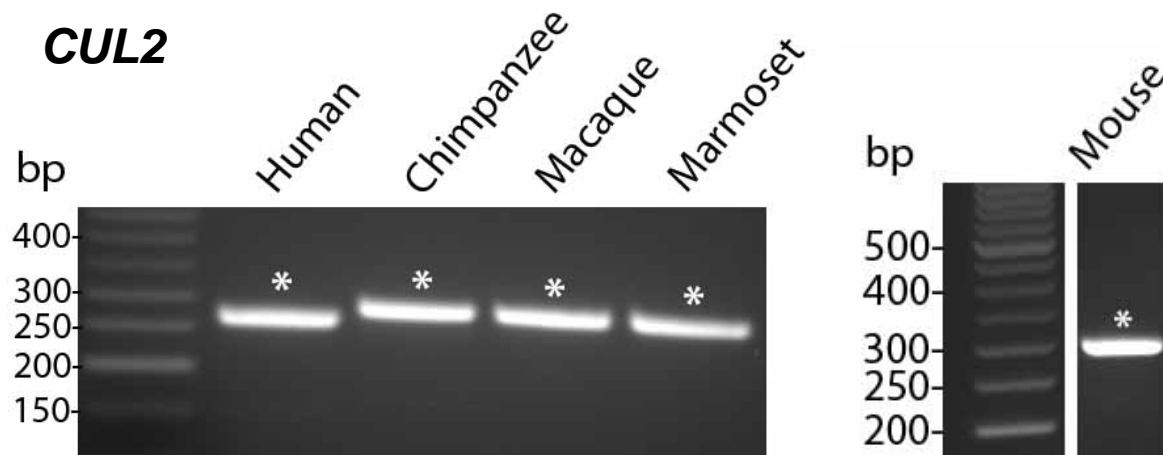


Table S1: List of primers for RT-PCR analysis of 39 MIR exons in 10 human tissues.

Primer Name	Forward Primer	Reverse Primer
<i>INPP5J</i>	GGTTGAAATGGCTGATGACA	CTTTGCTGGGAGCTGAAAAC
<i>NUMB</i>	TGCAGCCACTGTTACAATTCA	CGAACGCCTTCTTCATCTGT
<i>IL6ST</i>	GTTCGTGCGCTGTGGAGA	CAGTGGTGAGGAAAATAACAAGG
<i>SRRM2</i>	CGAGGAACAGCAAATTCAGG	CTTCTTCTGCTTTGGGGTTG
<i>MYO18A</i>	TAATGGGCACAATGTGGAGA	CTATGGACCAGCCACACCTT
<i>TLL6</i>	CATGAGCCGCATGTTAAAGA	TCATATCCTCCCCTGGTTTG
<i>TGFB2</i>	CACCGCACGTTTCAAGAAGTC	CACAGATGGAGGTGATGCTG
<i>NEK11</i>	GTGGTTGCCCTAGTTTGGAG	CTGCCTCTTGGAAATTCAGC
<i>VWF</i>	ATGATTCCTGCCAGATTTGC	GCTGTACATGCTCCCATCAA
<i>CUL2</i>	TGCAGAAAGACACACCACAA	CACGCGACGTAGCTGTATTC
<i>HORMAD1</i>	TGCACTGGTATTTCCAATAAG	CTGTAAAGCATCATAACATCCTAGC
<i>MICAL2</i>	TGATCCAGCTGCTTCTTCT	CTGGGCCTTAGGTCTGTGAT
<i>WSCD2</i>	TGAGTTCAACCGCAAGTACG	GCTTCAGGTCTTCAAAGTGC
<i>ST3GAL1</i>	TTGGGTCAGGACAATCCAT	CCAAGTGTGGTTTCTGACGA
<i>MTA2</i>	AGAAACCAGCTGTCCCAGAA	CCTCCAGGACAATAGGCTCA
<i>MTX1</i>	TGTCTGACCCTGCTCTCTCA	CAGTCTGCCAGCACAGATA
<i>KLC1</i>	CCCTGAGAACATGGAGAAGC	GCAGCACTGGAGAGAGAAGG
<i>CHRNA1</i>	GATCGTGACAACCAATGTGC	CGCCAGATCTTTTCTGAAGG
<i>AY070437</i>	CGGTTTTATAGCCCTGCTTG	CAGCAGAATCGCTTGAACCT
<i>SCRGI</i>	GAAGATGGACGGAGGAAACA	AGGGTGAAGTATGATGCCACCT
<i>EIF4G3</i>	CTGCACATTACAAAGGGGAAT	GAGACAGCGGGAGTGAAGAT
<i>ANKRD9</i>	TCCGTGCTGGGACCTTTG	TCACCTAGTTCGGGGATGT
<i>RGAG1</i>	CCGCCCTACTGACTGTGAAT	AAGGCCATCTGCTTGTTTTG
<i>ZFAND5</i>	TGCAGGAACAAAGGAAGAC	CGGGTCTGGTTAGTCTC
<i>FXD4</i>	GTGAGCCCTCGCCAAG	AGCCACGGATCTGCTC
<i>MTIF2 (2553751)</i>	ACCCTTCTGGATTTCCGTTT	AGATAAAGCAGCCCCAGTGA
<i>CPA5</i>	AGAGTCCCTGAAGCCAGGAT	GCTGAAGACCAGGAGTGTCC
<i>SLC6A12</i>	CTTGGCTTTCCATAAGCAG	GGTCTCGTCTTCCCTGGTC
<i>TYK2</i>	CTTGGATGGGAGCACCTG	CAATGTGGATGCAGACTTCC
<i>TUSC3</i>	GAAAGGCGATGTTGGAAAAA	TGGCACACACTGAATATAACAGG
<i>TFIP11</i>	GTGTAGGAGCGGCGTCTTC	CTGTGCGTTGGGGTTGAA
<i>CSF3R</i>	GGGGAGAGAAGCTGGACTG	GGGGAGCAGCAGGATGAT
<i>IL16</i>	GTGTGGGGACGAGATTGTG	TCCACTGATGCCTCTCCTTT
<i>MYTIL</i>	GGTTCAGTTGGTCTCACAGA	GCTTCTCCTCGGTGTCCA
<i>MTIF2 (2553754)</i>	GACCTACCGACCATTCTTCC	TCAGTGTATCTGGACTCAGCAA
<i>MUC15</i>	TGCACGACAGATTCCTTCA	GGCTCCCCGATAGAAGTGA
<i>C12orf52</i>	GGGTTCTGGGTTTCTGGATT	CTCCACGGGGTCTTCAT
<i>ARNTL</i>	GAATCCTGGGCCTTCATTG	AGATCCAGCTTGGGAGGAGT
<i>FGF14</i>	GCAGTGTCTTGTGGCAAGA	GCTGTCATCCTTGGTTCAT

Table S2: List of primers for RT-PCR analysis of 9 MIR exons in chimpanzees, rhesus macaques, marmosets and mice.

Gene	Species	Forward Primer	Reverse Primer	Skipping (bp)	Inclusion (bp)
<i>ARNTL</i>	Chimpanzee	GAATCCTGGGCCTTCATTG	AGATCCAGCTTGGGAGGAGT	121	176
	Macaque	GAATCCTGGGCCTTCATTG	AGATCCAGCTTGGGAGGAGT	121	176
	Marmoset	TGCTGGCTAGAGTGCATACG	GGCCTCTGGACTTGTGGT	150	206
	Mouse	CAGTGAATGCTTTTGAACC	CGATCCAGTGTGGGAGATG	165	None
<i>CUL2</i>	Chimpanzee	TGCAGAAAAGACACACCACAA	TGGAGGAGAGCGACATCAC	None	284
	Macaque	TGCAGAAAAGACACACCACAA	TGGAGGAGAGCGACATCAC	None	284
	Marmoset	TGCAGAAAAGACACACCACAA	TGGAGGAGAGCGACATCAC	None	284
	Mouse	CGTCAATGCAGAAGGATACG	ACCAGGAGAAGGTGTCATGC	None	289
<i>IL6ST</i>	Chimpanzee	GTTTCGTGCGCTGTGGAGA	CAGTGGTGAGGAAAATAAACAAGG	None	204
	Macaque	GTTTCGTGCGCTGTGGAGA	CAGTGGTGAGGAAAATAAACAAGG	None	204
	Marmoset	GTTTCGTGCGCTGTGGAGA	CAGTGGTGAGGAAAATAAACAAGG	117	204
	Mouse	CAGAGCTTCGAGCCATCC	CTAGCCAAATCCTTGGTGCT	None	235
<i>MTA2</i>	Chimpanzee	TGAAACGGGCCTATGAGACT	ACAGGTGCTCAGTCCTCCAG	None	343
	Macaque	TGAAACGGGCCTATGAGACT	ACAGGTGCTCAATCCTCCAG	None	343
	Marmoset	TGAAACGGGCCTATGAGACT	ACAGGTGCTCAATCCTCCAG	None	343
	Mouse	GGCACCTCTGAAACCAAAAA	TCCCCTAAGATGCTCAATCC	None	440
<i>MTX1</i>	Chimpanzee	TCTGACCCTGCTCTCTCAGC	CCGCTGGATGGAGACAAT	None	358
	Macaque	CGTCTGGGCTCTCAAAAGTT	TCCTCTTCATCCTCCTCAGC	None	401
	Marmoset	TCTGACCCTGCTCTCTCAGC	CCCCTGGATGGAGACTAT	None	359
	Mouse	GGGAGTGCCTAACCCTTCTC	GAACGCCATCAGTCCTCTC	None	439
<i>NUMB</i>	Chimpanzee	CCAGCAATCCTCAGACACCT	TGGCCTCTGGAACATAAACA	105	190
	Macaque	CCAGCAATCCTCAGACACCT	TGGCCTCTGGAACATAAACA	105	190
	Marmoset	TGGGAAGGAGTGCCAGTG	TACATTTTCCAGAGCGAACG	235	320
	Mouse	CAGAGCCACATAGCCACAGA	GCTTTGCCGTAGTTTGTTC	102	187
<i>SRRM2</i>	Chimpanzee	CAGCAAATTCAGGAAAAAGTGG	CTTCTGCTTTGGGGTTGGT	None	311
	Macaque	GTACGAGGAACAGCAAATTCAGGA	GGGGTTGGTGAGCGAGAACT	None	311
	Marmoset	CAGCAAATTCAGGAAAAAGTGG	CTTCTGCTTTGGGGTTGGT	None	311
	Mouse	CGACTCATGTTGCTGGAAAA	GGAGTTGGTGAGCGAGAACT	None	271
<i>TGFBR2</i>	Chimpanzee	CACCGCACGTTCAGAAGTC	CACAGATGGAGGTGATGCTG	159	233
	Macaque	CACCGCACGTTCAGAAGTC	TGTGGCTTTTACAGATGGA	169	243
	Marmoset	TTGGGGCTCGGTCTATGA	TCACAGGTGGAATCTCACA	222	296
	Mouse	GAGAGGGCGAGGAGTAAAGG	GGACTTCTGGTTGTCGCAAG	291	365
<i>TYK2</i>	Chimpanzee	CTTGATGGGAGCACCTG	CAATGTGGATGCAGACTTCC	None	320
	Macaque	ACTTGATGGGAGCACCTG	CGATGACTCGCTGAAAGTGA	None	320/ 379
	Marmoset	AACCTTGATGGCAGCACCT	GTTTATGCGGATGTGAATG	None	420
	Mouse	GGTCCCAAGCCTGAGTA	CAGTAGCACCATCAAGCATC	None	303