

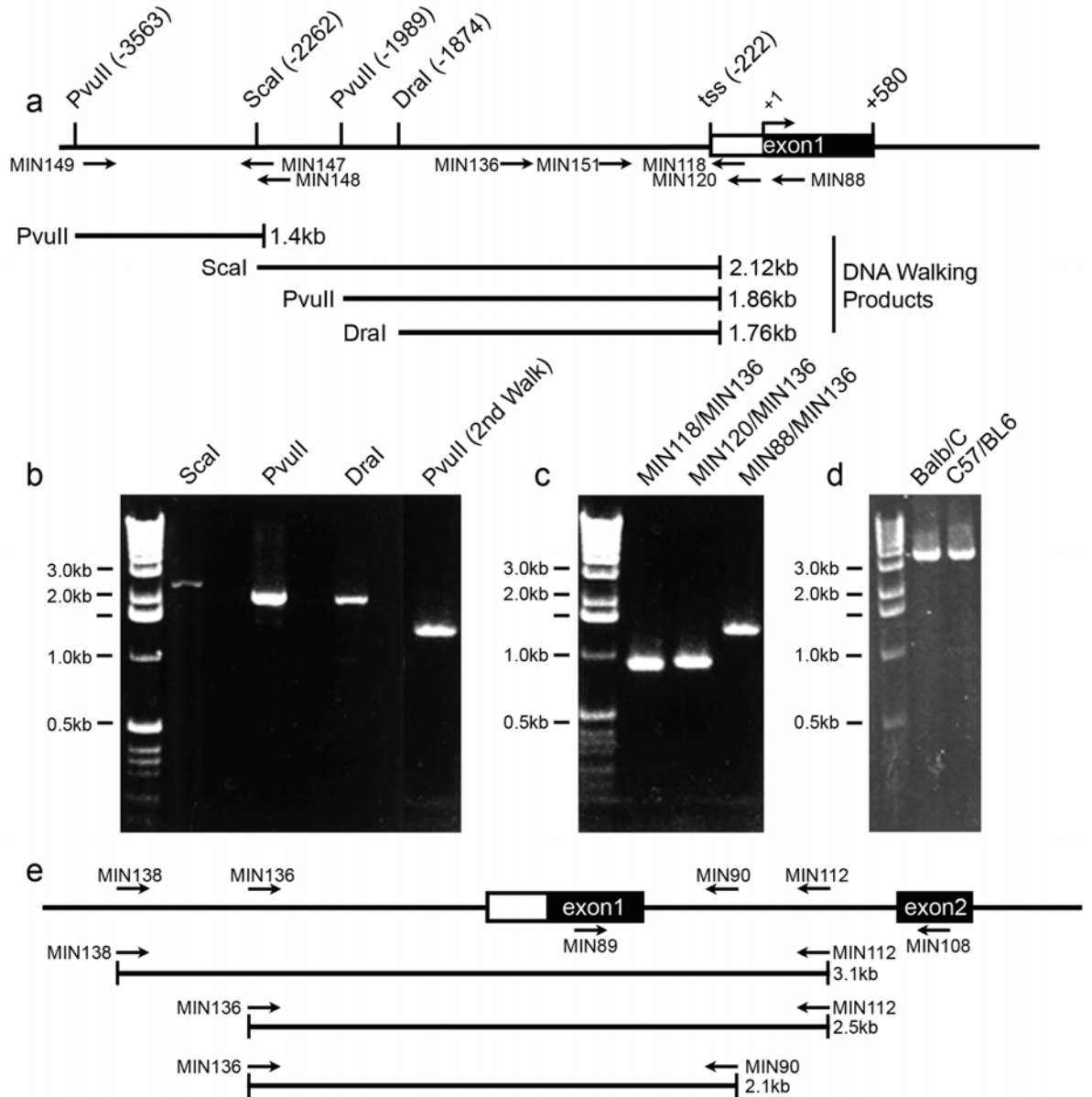
Cai et al. Supplementary Information

Supplementary Methods

The 5' flanking region of the murine *Rds* gene was isolated from C57BL/6 genomic DNA using the PromoterFinder™ DNA Walking kit (Clontech Laboratories, Inc., Palo Alto, CA). The kit contains five libraries of restriction enzyme digested (EcoRV, ScaI, PvuII, SspI and DraI), uncloned, and adaptor-ligated mouse genomic DNA. Following the digestion, each pool of DNA fragments is ligated to an adaptor. The kit requires two rounds of PCR reactions. The primary PCR reaction was performed with the gene specific primer MIN88 (located in exon 1 of *Rds*) (Fig. 1A), and an adapter primer (provided in the kit). The PCR product was diluted and used as a template for the second PCR reaction using a nested gene-specific primer (MIN118 or MIN120, located in the 5' UTR of the *Rds* gene ~100 bp upstream of the ATG designated as +1, see Figure 1)) and an adapter primer (provided in the kit). 2.12kb, 1.86kb and 1.76kb PCR products were obtained from ScaI, PvuII and DraI libraries, respectively (Fig. 1a,b). Restriction analysis of the resulting sequence revealed the presence of PvuII and DraI sites within the 2.12kb fragment (Fig. 1a), which is in agreement with the PCR amplification from the libraries. We confirmed that the promoter fragments were contiguous with the entire coding region of the *Rds* gene [18] by amplifying from a mouse bacteriophage genomic library using the primers MIN136 (located within the isolated fragments) and either MIN118/MIN120 or MIN88 located in exon 1 of the *Rds* gene. The expected PCR products of 894, 931 and 1371 bp, respectively, were observed (Fig. 1c). The contiguity was also confirmed by Southern blot analysis in which an expected size of ScaI fragment was detected with the 5' flanking or exon 1 as a probe (data not shown). The same strategy was used again to obtain the larger 5' distal sequence of the gene using gene specific primers MIN147, MIN148 in combination with adapter primers 1 and 2 (same as above). A 1.4kb fragment was obtained from the PvuII library (Fig. 1a, and 1b, last lane). The contiguity of this fragment with the rest of the *Rds* gene was also confirmed (data not shown). In addition to confirmation of contiguity by PCR the isolated flanking region was successfully aligned with the database sequence for the *Rds* gene (www.ensembl.org). To confirm that there were no gross strain differences, the full flanking region was amplified from Balb/C and C57/BL6 genomic DNA with MIN149/MIN120, and bands of equal size were observed (Fig. 1d).

To rule out the possibility that this 3.5kb 5' flanking region fragment was from an *Rds* pseudogene, amplification using sense primers within the 3.5kb fragment and antisense primers within intron 1 of the *Rds* gene was done and products of the expected sizes (2.1kb, 2.5kb, and 3.1kb) in size were consistently observed (Fig. 1e).

Supplementary Figure 1



Supplementary Figure 1. Isolation of the 5' flanking region of the mouse *Rds* gene. **a.** Schematic showing amplification plan. Depicted are the relative location and direction of the different gene-specific primers designed to isolate and amplify the 3.5kb flanking region fragment of the mouse *Rds* gene. The ATG start codon is defined as +1 while the transcription start site (tss) is -222. **b.** PCR products obtained from amplification of three different libraries were visualized on a 1% TBE agarose gel. The name of each library is indicated on top of each lane. PCR reactions without any DNA template were included as negative controls. The same strategy was applied again and the product obtained from the PvuII library was shown in the last lane. **c.** The contiguity of the 3.5kb fragment with the *Rds* gene was confirmed by PCR amplification. The primer sets used in each amplification are shown on top of each lane. **d.** Amplification of the 3.5kb fragment from Balb/c and C57BL/6 genomic DNA using MIN120/MIN149 primer sets. **e.** Depicted are the relative location and direction

of the different primers designed at the 5' end of the 3.5kb fragment and intron 1. The sizes of the products with different primer sets were also indicated.

Supplementary Figure 2

[5' flanking region

Vector **PvuII** E-Box

-3588 GCGTGGTTCGACGGCCCCGGGTCTG**CTG**TTTTGTCTGTATGTGTACCTGT**GTGCCATGTG**

MIN149→ E-Box

-3528 **CATGCCTGTTACCTGAGGAGACAAGAAGAGATCATCAGGTGCCAGCCACC****CGCGTGG****GTG**

Mamalian transcriptional repressor

-3468 **GTGGGAATTGAA**TCTGGATCTTCTGTGAAGAGCAGCTAGGGCTCTGTTTGTGTTTGTGTT

-3408 TGTGTTGTTGTTGTTGTTGTTTTCGAGACAGGGTTCCTCTGTGTAGCTCTGGCTGTCCTG

RTR

-3348 GAACTCACTCTATAGACCA**GGCTGGCCTTGA**ACTCAGA**AATCCGCCTGCCTCTGCCTCTT**

-3288 AAGTGCTGGAGTTAAAGGTGTGTGCCACCACTGCCGAGCTCTTTTTTTTTTTAAAGAAAT

-3228 GTTTGAAGATTTATTTATTTATTTATTTATATATGTAAGTACACTGTAGCTGTCTTTAGACGC

CAR/RXR & PNR E-box

-3168 ACCAG**AAGAGGGCATCAGATCTCATTACGG**GTGGTTGTGA**CCACCATGTGGTT**GCTGGG

-3108 **ATTTGAACTC**CGGACCTTCGGAAAACCAGTCGGGTGCTCTTACCCACTGAGCCATCTTAC

PNR

-3048 CAGCCCCTTTTCTTTTTCTTTTTGAGTTCCAGACAGGGCTTC**TCTATGTACTTTTTT**

-2988 TCCCTGGCTGTCTGGACTCTCTTGGTAAACCAGGCTGGCCTAAGAAATCCACCTGCCT

VDR/RXR

-2928 CTGCCTTCT**GGTGCTGGGATCAAAGCGTGTGC**TACTACCACCTGGCTTGGATTTTGTA

-2868 TTTTTATTTACTTCTTTTTGTTTTTTTTTTTTTTTAATTTTGGAGGGGGTGTCTCTG

CAR/RXR

-2808 GGAGGGAGGGTGAA**TTGAGAGGACCGGAAGTACATGGA**ATTGGGGCGGTTATGTGAA

Mef2C

-2748 ATATCCAAATAATCAATAAACAATAAAGGTAAAAAATCA**GCGGCTTAAAAAATAAT**

SmaI

-2688 **TTCAA**ACAGACACTTCATAGAAGAAGGTACAGGTGATAAATAAGCAAGGAAAGGTG**CCCCG**

-2628 **GGGATGGGGAATGGACCCATGGGTAAAGAAAGCGTGAGACCTAGGGTCCAGTCCCTAGCA**

-2568 GCCATGTAGAACCGCTGGCATGGTGGCTCATTCCCAGAACCCCTCGTCTAGGAGCCGGGCA

-2508 TGATCTGGGCTCCCTGGGCAGCCAGCCTGCCAGGAGGAGCCTAGCAGAGAGAAAGACGG

GC-Box

-2448 CAACGCT**CTGCCCTCCCCTCT**ATACAGAAGTTCTGGCACACGCACCCAACCGAACACAT

Mef2C

-2388 ATGTATGCACAGGATCCTCAGTATAAAAGTGAGGCGA**TTGCCAATTAAAAATACCAACGT**

E-Box

-2328 GCTACCTTCGT**TACACACGTGAGAAT**GGTGAAGACTGGAAGGCATGGTGGCACACACCTCT

ScaI GC-box MIN138→

-2268 AATCCC**AGTACT**TGGGAG**GCAGGGGTGGGGTGGGGTGC**GGATCTCTGTGAGCTTGAGAGC

-2208 **TGCCTGAGCTACATAGTAAGTTCCAGGACAACCCAGGACTACCTAGAGAGACCCTGTCTC**

GC-Box GAGA-box

-2148 AAAAAAGCC**AGGGGGTGGGGGAC****CAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG**

←MIN147 ←MIN148

-2088 **AGAAAATTGGGGCAG**GAGAGGTGTCCCTTGTGCTTTACAGGGACTGGTGT**GGTCCCA**

SP1 **PvuII**

-2028 **GCCCCTA**CAACTAGATAGCCTCACAACTGCCTGTAAC**CTCAGCTGC**CAGAGATTCAGTCGC

E-box & VDR/RXR

-1968 CCTCTTCTGGTTCTGTGGGC**TCTGCACCCACGTGCACATCTCCC**ACCTCCACTTACAT

DraI PXR/RXR

-1908 ACATAATAAAAAGAAAATCTTT**TTTAAAAA**AT**GTAGCCGGTCATGGTGGTGCATGC**CTT

Otx2 VDR/RXR

-1848 **TAATCCCAGCA****T**CGGGAGGTAGAGGCAGGCCAGCCT**GGTCTACAAAGTGAGTCCAGGA**

-1788 CAGCCAGGGCTACACAGAGAAAACCTGTCTCAAACAAAACAAAACAAAACAAAAGT

AP1 NF1

-1728 ATACTTCAGCCGTTGAGTCAGAAAGGGGGATAAATTCAGGCTAGCCTTGGCCACAAGGC

-1668 AAAATCCTGTCTCAAACAACAATATAAAATATAACAAGTCATTCAAGCTAGTCTGGT

-1608 TGGACGTCTGGGGATGGTAACTCTGTATTTCTGTTCACAATTTTGTAGCCAATATCTA

RAR/RXR

-1548 CTGGGGGCTGGAGAGATGGCTCAGTGGTTAAGAGCACTGACTGCTCTTCCAGAAGTCTCTG

E-Box BglIII CAR/RXR & PNR

-1488 AGTTCAATCCCAGCAACACATGGTGGCTCACAACCATCTGTAATGAGATCTGATGCCCT

Mef2C

-1428 CTCTCTGGTGTGTCTGAAGACAAGTACAGTGTACTTATATATAATAAATAAATCTTAGAAA

-1368 AATATCTACTAATTAGAAATGACAATTAACGGCGTGGTGATGCTGAGATTGGAAGATTT

-1308 CTTCAATTTGAGGAGGCCAGCTGGTATAGTAATATGAGGGCTCTAGGGAACTTGTCTT

-1248 AACAAAGGAAAAACATGACAGAAAAACCAACCCCAACAGCAACAAAACATAGCCGACTCA

VDR/RXR

-1188 CTCCCTAAGGCTTCCATGCCCTTGCTGTGACCACAGTGGCAGATGTATTGCTCCTTTG

MIN136→ EsrrB

-1128 GTTGATTCTTTGTTTGCTTGTGTTGTTGAGATAGGCTCTCAAGCAGCTCCCACTGACCTT

RTR

-1068 GAACTTGCTACACGTAGCTATGTGCGCTACTGTACTCCTTTAGTCTGCACTCAAGAGGC

-1008 AGAGGCAGTTGGATCTCTGTGCATTTGAAGCAATCTGTTCTACAAGGTGAGTTTCAGGCC

-948 AGCCCTGGGCTACAAAATGAGAGAGACCCTGTCTAAAATAAAAACAACTCACAAAACAC

-888 CCAACCCTAAGATAGGGCTGGAATCTGGAATTTTGTGTTGTGATCTTTAGTTGAGAC

-828 AAGGTTTCTCTGTGTATCCCTGGATGTCTGGAATCCTTTGTAGACCAGGCTGGCCTGG

Mef2C

-768 AACTCAGAAATATGCCTACCTCTGCTTCCCTAGTGATAGGATTGACAGTGTGGGCCACTG

E-Box AP1

-708 CTGTCTTTGTTTGTAACTTAAACACATGTGAATGGTGGTTTTTCTGCCTGTAGGTCTGT

-648 GAATCATTATGTGTCTGGCTCATGGAGCCAGTATTGGGTATCAGATCCCCTAGAACTGA

-588 GTTACAGATGGGGGTGAGCTTTTGTGTGGGTGCTGGGAACCAAGTCTGAACTCTCTGTAA

-528 GAGCAGTCAGTGCTCTTAACCACGGAGCCATCTCTCCAATCCCCTCTCTTGGCCTCAGAC

VDR/RXR & MIN151→

-468 TCACAGACCCAAGAGAACCTCACTGAGGCGTGCAGGAAGTCCAGCCTATTCTTTTAGC

-408 CAGCCTCTGTCTTTTGGCTCTGGATTCTTGAGCTGAGCTGGGTCCAGCATGTATATACA

CAR/RXR

-348 CGGAGACTCCTCTGGCCATGTTTTGTATTGGCATAGCTTTGTCTAATGGGATGACCCTG

OTX ↓ ↓ ↓

-288 GCTAAAGAGATTAGTGACTGCGTTGTGGATCCCACTTTTTAATCTGCAGTGTTCGGACTG

↓ ▽ ↓ ▽ ←MIN118

-228 TCCCTCCTTGGCTGGGAAGGACTCTGCAGATACGGCGGCTAGATTAGCTCCGGCTACCG

← MIN120 AP1

-168 TTAAGTAAAGGATCCCAAGCTAGGAGGCCCAAAATGGGCAACTCCCTGCAGC

Otx-like

-108 TTGGGCCATGGTGTCTTCCCTAGACCCTAGCGGTCCAGCCCCGGAGCTCACTCGGATT

+1

-48 AGGAGTGGAAAGCTGAACCGTGGGAGGCTGCTGAACGCACCTCGGTAAGCATGGCGCTGCTC

+13 AAAGTCAAGTTTGACCAGAAGAAGCGGGTCAAGTTGGCCAGGGGCTCTGGCTTATGAAC

+73 TGGCTGTCCGTGTTGGCCGGCATCGTCTCTCAGCTTGGGGCTGTTCTTGAAGATTGAA

+133 CTTGCAAGAGGAGCGAAGTATGAATAAATCTGAGAGCCACTTTGTGCCAACTCCCTG

+193 ATAGGGGTGGGGTCTGTCTGTGTCTTCAACTCTCTGGCTGGGAAGATCTGCTATGAT

←MIN88 ←MIN89

+253 GCCCTGGACCCGGCCAAGTACGCCAAGTGAAGCCCTGGCTGAAGCCGTACCTGGCTGTC

Supplementary Figure 2. Sequence of 3.5kb of the 5' flanking region of the mouse *Rds* gene. E-boxes are shaded in gray; GC boxes and GAGA box are highlighted and rectangled, other cis-elements are indicated as rectangles. Transcription initiation sites by either arrows (minor initiation site) or arrow heads (major initiation sites) [21]. The ATG translation start codon was defined as +1.

a Supplementary Figure 3

		Section 1										
		(1) 1	10	20	30	40	50					67
Mouse	(1)	-----										
Cow	(1)	-----										
Human	(1)	AATGATTTGGAGACCTTGAAGAGGAGTGTGTGGGTAGTGAGTCTAGTGTAGGGGAATCAATGCACAT										
Xenopus_T	(1)	-----										
Rat	(1)	-----										
Consensus	(1)											
		Section 2										
		(68) 68	80	90	100	110	120					134
Mouse	(1)	-----										
Cow	(1)	-----										
Human	(68)	AAGGGAAGAAAGGAGATTCTGGATTAGAGTTTTGACCCACTTGCCACCAAGAGCTCACAGGCTTCAT										
Xenopus_T	(1)	-----										
Rat	(1)	-----										
Consensus	(68)											
		Section 3										
		(135) 135	140	150	160	170	180	190			201	
Mouse	(1)	-----GCGTGGTCCGACGGCCCGGGCTGGTCTGTTTTGTCTG										
Cow	(1)	-----GGTATGAGTATGTGTCA										
Human	(135)	ATTCTAATCATGAAACCCTTTTTGGTATTAGGTGGACAGGAATTTGATGACAAGATTGGTTTGTCTCT										
Xenopus_T	(1)	-----TGAAAAGCAGGGGTAATAGAGGGAATACCCTGCAACTGCTGGGGTG										
Rat	(1)	-----										
Consensus	(135)	G G GA C G A GTTTG										
		Section 4										
		(202) 202	210	220	230	240	250					268
Mouse	(37)	TATGTGTACCTGTGTGCCATG--TGCAATGCCTGTTACCTGAGGA--GACAAGAAGAGATCATCAGGT										
Cow	(17)	TATTTCTGGTTGT-CCGAATG--TCCT-CTCTTTAGGCGGAGG--GAGAACTTTGCAGCACATCTCT										
Human	(202)	TTTTTTTTTTTTTT-TGAGATGGAGTCTTGCTCTGTTCGCCAGGCTGGAGTACAGTGGTGTGATCTCA										
Xenopus_T	(47)	GGAAAGAAC TACA---CAATG-----TCCAA TTTGCCCCAGTGTGATTAAACCCTTCCACAATCG										
Rat	(1)	-----GCGCTGACACGTCCGAGAGACA TTTCACTCAGC-----AAACTC GGCCCTACCTTGT										
Consensus	(202)	T T T T TTGT TG ATG C TGC TTT C CAGG GA AA A GG CAC TCT										
		Section 5										
		(269) 269	280	290	300	310	320					335
Mouse	(100)	GCCCAGCCACCGCGTGGTGGTGGGAATGAAATCTGGATCTTCTGTGAAGAGCAGCTAGGGCTCTGT										
Cow	(76)	ATTCAGTGT---CTCTGATGATGAAGAGTTGAAATCCTTTGAGGGTCCAAAGCTATTTAGAGCTGA										
Human	(268)	GCTCACTGCAACCTCTGCT--TCCTGGTTC AAGTGGTTCCTATG-CCTCAGCCAGCCTCTGGGAGT										
Xenopus_T	(105)	GGGCAGAACTATGGGGGAGGCAGAAAGAGGCACGTGGCTAGGGCG-CACCCTCTCCCTCCACTCCCC										
Rat	(52)	GACCGTGGG---GAGGCTGGCCGTTGGGATCCGTCTTCCCAAGTGAAGGCCGTTTCTGACTATGC										
Consensus	(269)	G CA G CG GG TGGT G GTG A TGG T GTC AA AGC T GACTCTG										
		Section 6										
		(336) 336	350	360	370	380	390					402
Mouse	(167)	TTGTTTG--TTTGTTTGTTTGTTTGTTTGTTTTTTCGAGACAGGGTTTCTCTGTGTAGCTCTGG-										
Cow	(140)	ATCTTAGCTGTGAGAAGTGGTCTGACAA CAAAAT-AGCAAGGCTGATTTTCCCA TAAAGCTC----										
Human	(332)	ATAGCTGGGGTTACAGGTGC-CTGCCACCATGCCAGCTATTTTTTTTTTTTTTTTGTATTTTTAGT--										
Xenopus_T	(171)	TAGTCAG-AGCCCTAGTTGC--CACTTGTCAGCG-CCCACAAACACACACACAGTGA CACTGTGGG										
Rat	(115)	CCACTGGACACTTACCCGATCTCTGTTG CAGGAA---CCGTTCTGTTGCAAAA TGAAGACAATCA										
Consensus	(336)	T TT G GT AG TG TCTG TTGCA G C A C TTTC C GTGA GCT										

Section 7

	(403)	403	410	420	430	440	450	469
Mouse	(232)	CTGTCCTGGA	ACTCACTCTA	TATAGACCA	GCTGGCC	TTGAA-CTC	-----	AGAAATCCGCC---
Cow	(202)	AGAACCCTGG	TCTCAGAGAT	CAGTCCAG	ACTGGAGTT	CAAACTTGG	GTC	T-AGCAATGGGATAAGTG
Human	(396)	AGAGATGGG	GCTTCACTAT	GTTGCCAG	GCTTGTCT	TTGAA-CTC	CCTGACT	-TCAAGTGGTCCACTTG
Xenopus_T	(234)	GGAAGGGAG	TGCACACTA	AATGT---	GTGTTG	TAAAAATG	CTGAGGTGAA	TGAGCGCTGGCTAGTA
Rat	(179)	CAGTTACATTT	TCCCAAATC	TTTGGCTG	TATTGCAA	TGGTTGTT	-TCATTCT	TGTAATCTCCAACTGA
Consensus	(403)	GG	GG	T	CAC	AT	TTG	CCAG

Section 8

	(470)	470	480	490	500	510	520	536
Mouse	(288)	CCTCTGCCT-	CTTAAGTG-	CTGGAGTTA	AAGGTGTG	TGCCACC	ACTGCCGAGC	--TCTTTTTT
Cow	(268)	TTTTGTT-TG	CTGAGGTG	ACTACATT	TGGAAGG	GAAAAA	CAAAAATCAT	GTCCTCA
Human	(461)	CCTTGGCCTC	CAAGTG-	CTGGAATTA	CAGGCATGA	ACCACACAT	GCC--TTGG	TTTGTCT
Xenopus_T	(298)	CATGAAAGCC	CTCATG-	GACAGAA	GTTCTTT	GTA-GATC	CACCGCAA	AGAAC--
Rat	(245)	ACATTTCTA	ACCATG-	GATTAACA	ATATAG	GTA-CTGA	CTGGTTAA	CAGTATT
Consensus	(470)	CCTT	CCT	CT	A	GTGACTG	A	TTA

Section 9

	(537)	537	550	560	570	580	590	603
Mouse	(351)	TAAAGAAATG	TTTGAAGAT	TTATTATT	TATTATAT	---GTAAGT	AC-CTGTAG	CTGTC
Cow	(334)	CACAT-CTCG	TATGCGTAG	AGAAATACT	CCTTTGA	-----	TTTTT---	CCTTAGT
Human	(525)	TAAAGCCCT	TGTACTTAT	TGCACAGGC	TGTTCTG	AGAAAGTA	AGATTATT	GG-ATCT
Xenopus_T	(360)	TGCAATTTTT	TGCTATGGG	TCAAATG	CTTCTGC	CTAAAGTT	CACTGGTTC	-CCAGT
Rat	(310)	CAAATAAAC	TGCAATTT	CTTACTTT	TTTTT	TACAAA	ACATTTAT	AAATATT
Consensus	(537)	TAAA	TGT	ATTA	T	A	AT	T

Section 10

	(604)	604	610	620	630	640	650	660	670
Mouse	(414)	AGACGCACC	AGAAAG-----	AGGGCAT	CAGATCTC	ATTACGGG	TGTTGTGA	AACCACCA	TGTGTTG
Cow	(387)	AGAGGAATC	TTAA-----	AGAGTGT	T-AGGTGG-	TGAGTCTA	GTAGA-AT	CAACAC	-----
Human	(591)	AATGCATTTT	AAATTTT---	AGGGTGG	TGAGGTGG	CTCACAC	CTGTAAT-	CTCAGCA	ATTTGGG
Xenopus_T	(426)	GTACAAAC	CAATAGGG	ACGAATGG	GCTGCCAG	AGGAATAA	AAGGATAA	AAAA	CATCAC
Rat	(377)	ATACAAAG	CAATTTT---	AGTGAG	ACATACTATA	CAAA	TGAAGGTAT	TAAAG	CAAA
Consensus	(604)	A	AC	AA	CAAAA	AGGG	GTG	AG	TGA

Section 11

	(671)	671	680	690	700	710	720	737
Mouse	(475)	CTGGGATTTG	AACCTCCG	GA	CCTTCGG	AAACCAG	TGGGTGCTC	TTACC
Cow	(438)	AAGGGAGCAA	AGGAGATG-	C--CAGG	TTGAAGA-	TTAGACC	CTCTTACT	GCTT---
Human	(654)	GTTGAGGCAG	AAGGATTG-	CTTGAG	CCCAAGG	AGTTTGA	GACTAA	CTAGG
Xenopus_T	(488)	CTTAGTATTA	AATGCCTG	-----	CAGCTAA	ATTCCCTT	ATACTCC	CAGC
Rat	(436)	CCCACACC	ACTGACAG	---TGAG	TGACC	GTCTCG	GAGC	CGGC
Consensus	(671)	CT	GGA	CA	AA	G	CTG	C

Section 12

	(738)	738	750	760	770	780	790	804
Mouse	(542)	GC	CCCTTTTT	CTTTTTT	CTTTTT	TGGAGT	TTCC---	AGACAGGG
Cow	(497)	---	CGCCTCT	TATTCTA	ATCATGG	AACTTCC	TTAGTATT	CAGTGG
Human	(717)	CT	CCGTCGCT	AAAA	TTTTTT	TGAAAA	TT-----	GTAATAG
Xenopus_T	(549)	--	CAAAGAT	TCGTGT	TATAA	TTAAGCTT	CTTAGC	CTAT
Rat	(500)	TAA	CAGAGCC	ACTAAAT	TCTCCAG	AGCTAA	----AGG	ATTTCC
Consensus	(738)	CC	CTC	ATTTTT	TTTT	G	A	CTT

Section 13

	(805)	805	810	820	830	840	850	860	871
Mouse (604)		TGGCTGT	----	CCTGGGACTC	-TC	TTGTAAACCA	--GGC	TGGCCTAAGAAATC	CACTGCCTCTGC
Cow (560)		TGGGTTTGTT	-	CTTAAACTCCT	TGTA	CTTATGCATAGAC	CGTT	TGGAGAAGTC	TAAATGCAATTATC
Human (778)		GGCTGTAAAA		CTTTACTCTC	--	TAAAGAAA	CAAACAAC	ATTATTAA	AAAGTGAGCATGC-TGGGC
Xenopus_T (612)		GGATAAAGTG	CAAT	TGGGGTGTG	TTTT	TGTGTAGAGG	-AAAATGACGATA	AATAG	CTTAAATGA-----G
Rat (563)		TTTGCTTCAT	-	CTTTAGGC	CAGTAC	TTAAGGACA	CAGA	AAATCAATGCGT	AATAACAAATTCATA--C
Consensus (805)		TGG T T T		CTTTAGACTC		TTTAGT AA CA	AAC	ATGAA AA TC	AAATGC T C

Section 14

	(872)	872	880	890	900	910	920	938				
Mouse (664)		CTTCTGGGTG	CTGGG	ATCAAA	GGCGTG	TGCTA	CTACCACCTGGCT	TGGATTTTGTATTTTATTTAC				
Cow (626)		ATTG	-GGTATGTGC	ACTTAAAA	----	TTTAAATAC	----	AGATA	GATAAATTACTCTCTCA--AA			
Human (842)		ATTGTGGCAGG	TAC	CTGTAA	TCCAGC	TTCTCAGGAGGCTG	AGGTG	GGA	GGATTGCTTGAGAAAT-AG			
Xenopus_T (673)		ATTG	-TGTTT	CAATAC	CTAAT	----	TGCTGCTTT	----	ATGTTGGTGGCTGCA-CGCTATC-AG			
Rat (627)		TTTCCACAA	CAACAACA	GAT	----	TAAAAACA	A-	---	GGGAA	GGA	AAATGATTTT	TGTT-AC
Consensus (872)		ATTG GG A	CTAC A	CAAA		T CTAATA		AGGT GGA	ATT ATTT	TATT A		

Section 15

	(939)	939	950	960	970	980	990	1005									
Mouse (731)		TCTTTTGT	--TT	TTT	TTTT	TTTT	TAAT	TTTT	TGAGGGGGTGT	TTTCTCTGGG	AGGAGGGTGGAAT						
Cow (680)		TGGCTGCAGA	--AAC	TT	--ACAG	TCTAAAT	AT	-TCC	----	AAATTA	---	A--AAAG	TGGGC	AAAAG			
Human (908)		TAGTTGGAGACCAGCC	TGG	ACA	ACATAGAT	AGAT	AGAT	TCC	GACTC	AAAA	AGAA	ATA	AAAG	CA	GGC	AAAAG	
Xenopus_T (727)		TAAA	TGCTCA	----	TTT	CTCTT	TTTAGAT	AAA	TGA	----	ATTT	GAGG	AAT	ACT	GGT	CTGTACT	
Rat (684)		TGAGCA	CGCG	----	TT	CTAA	ACTCA	CTGAC	TAA	TGAC	-CC	TGA	ACC	CCA	ACC	TTGGC	ACTG
Consensus (939)		T TGC GA		TT TACA	TTTAAATA		T A G		ATTTA		A A	G	GGGC	AAAG			

Section 16

	(1006)	1006	1020	1030	1040	1050	1060	1072
Mouse (796)		TGAGAGGACC	GGGAAGTAC	TGG	AATTGGGGC	GCGTTATGT	GAAATATC	-CAAATAATCA-ATAAAC
Cow (731)		TGCTAG-ACAGACA	--TT	CACCA	AAGA	AGATATAC	AGATAACACATAAG	-CATATGAAAAGATGCTT
Human (975)		TGCTGA-ACAGACAC	-TT	CACCA	AAGA	AGATATGC	AGATGCAAAATAAG	-CACATGACAC-ATGAAA
Xenopus_T (784)		GGAGGG-AC	TTCAC	GGTCTCT	--AACT	ACGCCTTAGGTCT	ATAATATCA	CTGATAGATATATTTAT
Rat (745)		AGGCAGAGCA	TTTCC	TTTACC	-AGCG	GGGCTCGTGA	-GTGAGT	TATGACCCATGTGGT-GTAAACC
Consensus (1006)		TG AG ACAG	CAC TTCACC	AA	AG GCT	AGATGT	A ATATG	CA ATGA A AT AA

Section 17

	(1073)	1073	1080	1090	1100	1110	1120	1139
Mouse (861)		AA-ATT	AAGGTT	AAAA	--AAAT	CAGCGGCT	TAAAAAA	AT--AATTTCAAACAGAC-CTTCAATAGAA
Cow (794)		TGCATCGT	ATGCC	ATT	-GGG	AAATGC	AAATTA	AACTAGCGAGATGCCACAACAC-ACCTATTAAA
Human (1038)		AG-AT	CAATGTC	ATTAGGG	CACTGC	AAAT	TCAAA	CAAG---ATGCAGCTACAC-ACCTATTACAG
Xenopus_T (848)		AT-ATT	AGAGATGTTG	-CTC	CTAATT	AACTT	CTTAGGCCTG	ATATATATCTAAACGATATATTACTA
Rat (809)		TG-AT	CACAGG	AGTAA	AATAC	ACTTT	TGTAA	TCTTTCATTTGTCATATCTAGAGTCTTTCTCCATAG
Consensus (1073)		AG ATCA	AGGT AT		CACTGC	AAATTCAAA	A	A AT CA C A AC ACCTATTA AA

Section 18

	(1140)	1140	1150	1160	1170	1180	1190	1206					
Mouse (922)		GAAGGTAC	AGGTGAT	AAATAAG	CAAGGA	AAAGGTGC	CCGGGAT	TGGGGAA	TGGACC	CATGGG	TAAAGA		
Cow (859)		TGGCTAAAAT	CCAGAAC	ACTAAC	CAACAC	CAAA	TGCA	---	G-CTAGGGT	TGGAG	CAATGGG	AAC	TTTT
Human (1099)		TGGTAAAAT	CTGAAAC	ACTGAC	CAATAT	CAAA	TGTT	---	GGCAAGG	ACATGA	AGTAA	----	AA----
Xenopus_T (913)		TATTTTATCT	AATAATA	TCTAC	CTTTAC	CTGT	TAGGG	GAGAAT	TAGTGGT	TTTAA	TAGAA	GTC	ACAAA
Rat (875)		AAAGTAA	ACTTAC	ATACA	AGGACA	CAAAA	ATTTACA	---	AGTTTC	ATTTT	GGTA	CGGT	AGGCTCT--
Consensus (1140)		TA TAAAAT	AAACA	ACAA	AACA	TGC		GG TAGGG	TGGA	CAAT	GG	AC	

Section 19

	(1207)	1207		1220		1230		1240		1250		1260		1273
Mouse (989)		AA--GCGT	GAGACC	TAGGG--TC	CAGTCCCTAG	CAGCCATGTAGAA	ACGCTGGCA	TG-GTGGCTCATT						
Cow (922)		CATTCATTG	CTGGTGGGA--TG	CAAAATAGTA	CAGCTACTTCAGA	AAGATATTTT	TG-GCAGGTTTTT							
Human (1155)		----ATTG	CTGGTAGGAA--TG	CAAAATTGTACAGT	CACTTTGCAAGA	CAGATTTG-GCAGTTTCTT								
Xenopus_T (980)		CAAAGATTG	GCCCTGACA	CCTCTG	GGCCCCC	CAGG--GG	CAGAATGGAGTTGG	GAGGAGCTGGTG						
Rat (937)		CGGTGTG	TGGACC	AATGT---	CAGGGATG	AGAAGCCCTGT	GATTTGACAGACA	GGAAAGAAAGCT						
Consensus (1207)		CA GATTG	CC GGGA	T CAG	G CAGCCA	GT G A GA	AG TG G AG T TT							

Section 20

	(1274)	1274		1280		1290		1300		1310		1320		1330		1340
Mouse (1051)		C CCGG	AAACCCTCTG	TCTAG	GGAGCCGGG	CATGATCTG	GGCTCCCTGGG	CAGCCAGCCTG	CCAGGAGG							
Cow (986)		AC---	AAAGCTAAACA	TAGTCTCA	CCGTAGGAT	TTCAGCAATTG	CACTCCTAGATATTTA	CCCAATG								
Human (1214)		AC---	AAAGTTAAACA	TAGTCTTACTAT	GTAATCTAG	CCATTGTGCTCCTAGATATTTA	CCAGATG									
Xenopus_T (1045)		GGCGTGGCA	CTGTGTC-AG	GTTTCA	GAGCTGGA--GG	TGAATAAAGGACA	AAACAGTGTGG	CCCAGGTG								
Rat (1000)		GG--GGCT	GGAGCG	GGAGG	GAAGAGTA	AGGA-TATA	CA CGAGA	CTTCTTAAGA	ATTCCACTGATT							
Consensus (1274)		C AA GCT	G TAGG	TCAG G	AGGAT TAG	CA T GCTCCT	ATATTTCCCCAGATG									

Section 21

	(1341)	1341		1350		1360		1370		1380		1390		1407
Mouse (1118)		AGCCTAGC	AGAGAGA	AAGACGG	CAACGCTCTG	CCC-CT	CCCCCTCTATA	CAGAAGT	TCTGGCAC	ACGC				
Cow (1050)		AGTTGAAA	ACTTATGTC	TACA-CA	AAAACCTTG	CAGACCAGAG	TTTTGGTAGCAG	CTT-----	ATTT					
Human (1278)		AATGGAAA	ATTTTCAG	-----	CAAAAACCTTG	CA--CGTGGAT	GTTTATAGCAGT	TTT-----	ATTC					
Xenopus_T (1108)		CAAC-AT	GGGATAT	ACTA-GG	CA--GAT	TCCCAAGTTG	TCTCGTTAACCT	ATTAGTCGCC	AGTT					
Rat (1064)		TGCAATAA	TTAAAGTAA	TTTCA	CA----	CTAGCCGTG	TGCAGGCGG	TCATGAGGC	TATGAGAAGAGC					
Consensus (1341)		AG AAAA	ATAT A TAC	CAA	ACTTGCC	CT G TCTTTA	AG AGTT T A TC							

Section 22

	(1408)	1408		1420		1430		1440		1450		1460		1474
Mouse (1184)		ACCCAA	CCGAA	CACATATG	TATGCA--	CAGGATCC	T CAGTATAAA	AGTGAGGCGATT	GCCAATT	TAAA				
Cow (1111)		AT--AAT	TGCCCA	AATTGGA	AGCAGTCA	AGTTGCCCTCTA	ATAGGTGA	-----	ATTTGAT					
Human (1333)		AT--AAT	TGTCAAAA	ACTTGAAT	CAACCAGGAT	TATTCCTG-AT	AGGTGA	-----	AGGAAT					
Xenopus_T (1171)		AC---TG	GCACCC	ATCTG	CCAGCCG-TAG	TATGTCCGCTCT	ACGCACG	TCAGGGGCTTA	ACTCAG					
Rat (1127)		CT---GT	GACGCC	AGAGAG	CAGGCG	CAGGCTGGT	AACCC--AGG-	GAAG-----	CCCAGACA					
Consensus (1408)		AT AA TG	CCCCA	TGGAAGCAG	CAGGATG	TC CT A	AGGTGA							

Section 23

	(1475)	1475		1480		1490		1500		1510		1520		1530		1541
Mouse (1249)		AATACCA	ACGTGCT	ACCTTCG	TACACA-	CGTGA	GAATGGTGA	AAGACTGGA	AAGGCATGGT	GGCACACA						
Cow (1164)		AAACAC	ACCATGAT	ACATTCAT	ATATAA-	TGGAATAT	TATTCAGTGA	TAAATAGAAAT	TGAGCTATTAC							
Human (1386)		AAAC---	CGTGGT	ACATCCAT	GTGA--	TGAAACGTT	TATTCAGTGA	TAAAGAAAT	TGAGCTATTAA							
Xenopus_T (1234)		TTTAC--	AAGGCT	TATGGATG	TCC TGA-	GCAAAGG	CTTTACTGCT	TTAACCCCT	CATCCCTGTAA							
Rat (1180)		AGTCC	TAACTG	GCACATA	AAC TCA	TCTTCTA	ATGTGTACA	ATACAGGA	AAGGAAGTCAGCA	ACTTG						
Consensus (1475)		AATCC AAC	GTG TACAT	C T T A	TG AA GTT	TTCA T T	AAA GAA	TGAGC	A TAA							

Section 24

	(1542)	1542		1550		1560		1570		1580		1590		1608
Mouse (1315)		CCTCTA	ATCCCAG	TACTTGG	GAGGCAG	GGTGGGTGGGG	--TG	CGGATCTCTG	--TG	AGCTTGA-G				
Cow (1230)		-CCCTG	ATT--ATTC	ATTG-GA	AGGACTGAT	GATGAA	GCTGATG	CTCAA	TA	CT--AT	AGCCACCTG			
Human (1447)		GCCGTG	AAA--AG	ATACAG	AGAA	TCA	TTAATCA	CATATAT--	TGCTA	AGGGAAA--	GAAGCCAG---			
Xenopus_T (1298)		GGGCAG	ATTGT	AGGAATA	AGCA--	CCTGCA	AGAGAA	CTGCC	TC	CGTTTCTA	TGGTTACT	CTTG	GAC	
Rat (1246)		---GAT	ATT---	GGCAC	AGAGAA	GAAGAA	AAAGGGCA	ACT---	CTA	AGACAG	CCAGAG	TTTTCTG		
Consensus (1542)		C CTGATT	AG ATAG	GAAGCA	G ATGAGG	A T TGCT	A TA	AGCTTG	G					

Section 25

(1609) 1609 1620 1630 1640 1650 1660 1675
 Mouse (1377) AGCTGCCTGAGCTACATAGTAA GTTCCAGGAC AACCCAGGA CTACCTAGAGAGACCCTGTCTCAAAA
 Cow (1291) ATGTGAAGAGCCAAC TCACC--GAAAAA---AACTCTGATGCTGGGAAAGATTGAAGG---CAAAAT
 Human (1505) -TCTGAAAA GGCTACATGT T--GTATGATTCCAACTGTAA-GATA TTCTAGAT--AAGG---CAAAA
 Xenopus_T (1363) AAATGCCATGGCTCCCTGCTA--CTCTGACACACGGT TTA TGTCTTTAA AAG----TGTCTCAAAAC
 Rat (1303) -TTTCGGTTGGCTGGGTTGTGGGTGGGAG----AAGGTACATTGCTCTCA AAG--GCTGT--CTGTCT
 Consensus (1609) AT TG GGCTAC T T GT AG AAC GT A TCTT AGAG TGT CAAA

Section 26

(1676) 1676 1690 1700 1710 1720 1730 1742
 Mouse (1444) AGCCAGGGGGGTGGGGGACAGAAATTGGGG
 Cow (1350) GAGAAGGGGACGGCA GAGGATGAGATGGTTAGATA GCATCA CCAACTCAATGGACGTGAATTGAGCA
 Human (1563) CTATAGATCTAGACGGTGGTTGCCAGGGCTGAG-GAGTGA GGGAGGA--GGAA-TGAATAG-GCA
 Xenopus_T (1423) TGGGTGACCTCCTTGGTCCATCACGTGTCA CACTG-GTGA CAGAAGCACTTTATGGCA GTGATGTT
 Rat (1361) TGTCTCGCAGAGT TTTGTCTATGTAGTGGACACAGGGGTAGAAAGGGTCCACACA CTCTGCTATTTCT
 Consensus (1676) G AGG G GG G TG GG CAGAG G GTGA AGA CA G A G GAAT GC

Section 27

(1743) 1743 1750 1760 1770 1780 1790 1809
 Mouse (1511) CAGGAGAGGGTGTCCCTTGTTGCTCTTACAG---GGACTGGTGT TGTGTC CCAGCCCCTCAAACTAGAA
 Cow (1417) GACTCTGGGAGACAGTGAAGGACAGAAAAGCCTGGCA TGTGCA--GTC CATGGGTCA CAAAGAGT
 Human (1625) GAACATGGCAG---GTTATT---AGAGTAG--TGGAAAGTATTCT--GT--ATGATACAAATAATGATG
 Xenopus_T (1489) CA--ACTGGTGCCCATGTCTC-----TGTGG-----GGTGTCT-----GAGAGTTTATAACAAA
 Rat (1428) CAGCTTTTTTTT--CTTGT TGGCCTTGAACTGTGACTCC TGTCT---TCAGTCACTGACTGCTGGG
 Consensus (1743) CA AT GGTG CC TT TTG TG AG GGA TG TGCT GTC TGA T ACAAC AG

Section 28

(1810) 1810 1820 1830 1840 1850 1860 1876
 Mouse (1575) TAGCCTCACA AACTGCC TGTAACTT CAGCTGCA GAGATT CAGTCGCCCTCTTCTGTTTCTGTGGG-C
 Cow (1482) CAGAC--ACA AACTTAGTGAATGAACAACAATCAAGC CACAAAAAGATGGAGAAACATTAAGCG-C
 Human (1680) AATAC--ATGACAT TATG CATTGGCAAAGT-----GACAGAATTATATGCACAAAGAC TGAAC--C
 Xenopus_T (1536) ATGTTG--AAATCACTG TTTATTTACATCATGC-----CATTTTCC TTTGTAGTACAGGTATGGG-A
 Rat (1490) ATTAC----AGGTGTATG CCAACATGCCTAGATTGCTGCTGTGT TATTTGAAAAAAGATCAAGTC
 Consensus (1810) AAGAC A AACT T TG AT TACA CAAGA CAGT T ATTTG A AAA T AG G C

Section 29

(1877) 1877 1890 1900 1910 1920 1930 1943
 Mouse (1641) -TCC TGCACCCACGTGCACATCTCCCA CCTCCACTTA-CATACATAAAT TAAAAAGAAAAAT-CTTTTT
 Cow (1546) ATATTGTGAA GGGAAAGAAACCTGCTGAAAAAGTTA-CATTCTGTATGATTC CAACAAT-ATGACA
 Human (1739) TTAATGTAAA CT-ATAGACTTTAGTTAA TAATAGTG--CATCAATATTGGTTCA TTAAT-T-GTAAACA
 Xenopus_T (1596) CCCGTATCCAGAATGCTCTGGGACCAA GGGTATTCCGGATAAGGGGTCTTTC CGTAAATTGGATCT
 Rat (1553) AAAATCAAAA GCCTTCTTTCCACTGCA GGCCTAATCTGGA AAGA AACAC TCCAATGATGACCGAA
 Consensus (1877) TA TG AAA AT CACT C TCAA A T CATAA AAT TTCA AAAAT T CA

Section 30

(1944) 1944 1950 1960 1970 1980 1990 2000 2010
 Mouse (1705) AAAAATA GTAGCCGGTCA-TGGTGGTGCATGCCTTTAAT CCCAGCACTC GGGAGGTAGAGGCAGGC
 Cow (1611) TGGAAAAGGTAAAAC TGTAGAGACAGTAGCTGTCTGGGAT--TGGGCA GGGAGGGAGGAAAATGA
 Human (1802) AATGTACCACATTAATGCA-AGATATT AATTAGAGGAGAAAC TGGTGGGGAGATGGAGATAATGG
 Xenopus_T (1663) CCAATAGGGCTGTTCTGCC CCAATAAGGGGTAATTAATCTTAGTGGGATCAAGTACAGGTA CTG
 Rat (1620) GGGACAACTGC GTTGGGGGATGACGAAGCAGAAATCAACGGGTACA TTTACACAGCCAGAGGATGG
 Consensus (1944) A AA G AGT TGCA GA TG T AT A AT TAG T GGGAGAGG AGAGG ATGG

Section 31

	(2011)	2011	2020	2030	2040	2050	2060	2077
Mouse (1771)		CAGCCTGGT	TCTACAA--	AGTGAG--T-	TCCAGGACAG	CCAGGGCT	TACACAGAGAA	AACCCTGTCTCAA
Cow (1676)		AGAGGATA	TCTACGG-	CAGTGAGA	ACATTCTGTACAA-	TACTGCTG	CTGCTGCTGCT	AAGTCGC
Human (1868)		GAACTCCC	TGTATTTT	CTGTTCA	ATTTTTTGTAAAC	CTAAAAC	TACTGTAGA	AATAATCCATTAA
Xenopus_T (1730)		TTTTATTAT-	TACAG--	AGAAAAGGG	AATCATTTAAC	CATGAAAT	AAACC	CAATAGGGCTGTCTTG
Rat (1687)		CCGGAGGGA	--ACGAG	CCC	TACAGTAAC	CAAAACGA	CCTCCGATC-	CCGCTGACGGCTGGGGTGG
Consensus (2011)		T TAC	CAGT	A A	TATTCAGTACA	C A	GCTAC	CC A A GCTG TTG

Section 32

	(2078)	2078	2090	2100	2110	2120	2130	2144						
Mouse (1833)		AA	CAAAACAAA	CAAA--	-----A-	CAAAAAA	-----GTATA	CTT	CAGCCGTTGAGT	CAGAAAG				
Cow (1741)		TT	CAGTCGT	GTCCGAC-	TCTGGGCG	ACC	CATAGA	-----TG	GCA	GCC	CACGGGCTCCC	CGTCCC		
Human (1935)		TTA	ATAAT	AATAA	AAT	TGTACAGATT	CACCAAGA	-----GT	GTA	-CA	TTCTAC	TTCCA	CTCTCTT	
Xenopus_T (1794)		CC	CAATA	AGGGT	AATTA	TATCTT	AGTTGGG	ATC	-----AA	GTA	CAG	CTACTG	TTTTATTATTA	CA
Rat (1751)		AGGT	TGGTGG	AGGC	AGCAA	ACAGC	AG	CACCATGA	CCTGTTACT	TAC	GG	CAGGAAGAGAGC	CAGTAGC	
Consensus (2078)		CA A	AG A	AA T	TA	A	CAC	AAGA	GTAC	CA	C G	TT	CAGTA	

Section 33

	(2145)	2145	2150	2160	2170	2180	2190	2200	2211					
Mouse (1885)		GGGG	GATAAAT	TCAAGGCT	--AGC	CTTG	CC-AC	AAGG	CAAAAT	CTGTCT	TCAAAC	CAAAAC	AAATATA	
Cow (1802)		TGG-	GATTCTC	CAGGCAAG-	AACAC	TGGAGT	GGGTTG	CCATT	TCCTTC-	TCC	AGTGCAG	GAAAGT	GGA	
Human (1996)		TGTT	GATGTAT	TGGTGACAG-	AA	TTT	TGACATA	CATT-	CAAT	TGATGGAT	C	GAGTTT	TGTTCTTTTC	
Xenopus_T (1856)		GAG-	AAAAGGGAAT	CATTT-	AAC	CATG	AAATAA	ACCAAT	AGGG	CTGT-	TCTGC	CCCAAT	AAAGGGT	
Rat (1818)		AACA	GAGCA	TCATG	CTGTG	TAC	AGGCC	CA	CAGGAGC	GGAAAC	CAGGGAA	C	GCTCCC	CGAAAGAAC
Consensus (2145)		GG	GAT	TCATG	CTG	AAC	TG	CATA	A	CAA	TCCTG	TC	A C	CAG AA GT

Section 34

	(2212)	2212	2220	2230	2240	2250	2260	2278					
Mouse (1949)		AA	TATAAC	AAGTCATTC	AAGCTAGTCT	TGGTTG	GACGTCT	GGGATGGTA	ACTCTGTAT	TTTCTGTT			
Cow (1866)		AA	AGTGA	AGG---GA	AGTCGCT	CAGTT	TGTGTC	CGACTCT	-----TAG	CGGC---C	TCATGG--		
Human (2061)		TTTT	TTGAGAC--	GTCAT	TTCACTCTT	TGTAC	CCAGGCT	GAGT--	GCAAT	GGCGCAA	TCTTGGCT		
Xenopus_T (1920)		AA--	T-----	TATAT	CTTAGT--	TGGGAT	CAAGTACAGG	-----T	ACTGT---	TTATTATT			
Rat (1885)		A	TAAAT	AAAAAGA	GGA	AGGCT	CACGG	TGAG	CGAGGAGC	ACCACG	GCGAGG	CGGGCC	CAGGACA
Consensus (2212)		AA	T A A	G	AT	TACTC	TGTGA	C	AGTCT	G	G	AACGGCG	TCATGG T

Section 35

	(2279)	2279	2290	2300	2310	2320	2330	2345					
Mouse (2016)		CA	CAATTT	TGTAAGC	CAATATCTA	CTGGGGG	CTGGAG	AGA	TGGCT	CAGTGG	TAAAGAGC	ACTG--	AC
Cow (1917)		-AC	-----	TGCAGCC	CACCA	GGCTCC	----T	CGTCC	ATGG	GACT	TCCCAGG	CAATAGT	ACTGG-AG
Human (2124)		CAC	-----	TGCAACC	TCCACTT	CCGGGT	-T	CAATTG	ATG	CTCC	TCC	TAGCCTCA	CAAGTA--AC
Xenopus_T (1965)		-AC	AG---	AGAAAAGG	AA	CCATTT	----T	TAAAA	ATGTGAT	TATT	TGATTAAGA	----	TGG-AG
Rat (1952)		TG	CCCGTC	TCTG	CTCAGT	TCCT	TCCTTTAG	TGGCCT	GC	TGGT	TGTGACC	TTTGGTTT	ACTGTGTT
Consensus (2279)		AC	TGCAACC	A	ATCCTC	CTG	ATGTG	CT	T	TTAAGA	ACTG	A	

Section 36

	(2346)	2346	2360	2370	2380	2390	2400	2412								
Mouse (2081)		TG	CTCTT	CCAGAGT	C-----	CTG	AGTT	CAATTC	CCAG	CAAC	ACATG	GTGG	CTCA	CA--A--	CCATCT	
Cow (1973)		T	GGGGT	GCCAT	-TG-	C-----	CT-	TCTC	CACTGT	ACAATA	ACTAT	TGACATA	AAT	-GA	TACAATAC	
Human (2183)		T	GGGATT	ACAGGTG	-C-----	CTG	TAC	CATACC	CAGA	CAATTTT	TGATTTT	TA	GTAGA	GACA	GGGT	
Xenopus_T (2018)		T-	CTAT	GGGAGAT	TGC-----	CTT	TCGT	AATTC	GGA	-----	ACTT	CTG	GATA	GA-	GATCCATAC	
Rat (2019)		T	GGGAAT	AAATGACA	C	ACTG	CTG	ACTAC	TATTC	TCA-	CAA	ACGAG	CCAG	CGAA	CCCTTCAA	AAAGCG
Consensus (2346)		TGGGATT	CAG	TG	C	CTGTCT	CAATTC	CA	CAA	A	ATG	G	T	A	GA	ACAAT

Section 37

(2413) 2413 2420 2430 2440 2450 2460 2479
 Mouse (2140) GTAAT-GAGATCTGATGCCCCCTCTCTGGTGTGTCTGA-----AGA-CAAGTACAGTGTACTT--
 Cow (2032) TATAC-GATATTAT--ATGATGGACTT----CCTGA-----TGTTTTCAGACAGTAAAGACT---
 Human (2245) TTCAC-CATGTTGGCCAGGCTGGTCTTGAATGCCCTGACCTCAAGTGATCCACCACACTTGGCTTCC
 Xenopus_T (2074) CAGCC-GTTGTAGGAAAGTTCATTCATAGTAACTTATA-----TGTATCCCCTTAAATAGCTGGA
 Rat (2085) TCAACTGAGAGAGCACAGCGTGAATTTTCA--AGTTGAAGCCTTTTGATCCTTGGCTGTGGCTG--
 Consensus (2413) T AC GATAT GGA AG TG TCTT CCTGA T GT CA CAC TGG CT

Section 38

(2480) 2480 2490 2500 2510 2520 2530 2546
 Mouse (2195) AT-ATATAAATAAATAATCTTAGAAAAATATCTACTAATTAGAAAAGACAAATTAAGTGGCGTGGTGA
 Cow (2082) ---CTGCCCGCAATGCAAG---AGACGGGGTTCATCCCTGGGTGGGAATATCCCTAGAGAAG-
 Human (2311) AAACCTGCTGGGATTACAGGTGTGAACCACTGTGCCCGGCACAGTTGGTATTTTATTGTTGTTT---
 Xenopus_T (2134) ATTTAAAATCAATGTAAATGCAAAAAGTGCTTA--GAGTAGCACTTTCATCAATTTTACATTCAC-
 Rat (2148) ---AGGGAGAGGAGACACAGAGGCTAAATGGAAACGGAGTCAGCAACACTAAAGAACATAGGTTACGT
 Consensus (2480) A TG A AATACA T GAAAAATGGTTC CAG A TG AAT AACT GTT G

Section 39

(2547) 2547 2560 2570 2580 2590 2600 2613
 Mouse (2261) TGCTGAGATTGGAAGATTCTTCAATTTTCGAGGAGGCCAGCC---TGGTATAGTAAATATGAGGGCTC
 Cow (2141) -----GGAATAGCAACCCACTCACTATTCTTTCCTGAGAGAA---TCCCATGG-ATGGAGGGGCTG
 Human (2375) -----GGAATGCAATTTCTGCTTATTACCCAAGTTGAGATCTTTTCCA--G-ATTATGACTTT
 Xenopus_T (2198) TT----ACTTGAAAGTTTACTTAAATGCTCGGACTAAGGAT--ATTCG--G--ATAAGGGGTCTC
 Rat (2212) TGC---CTTACCCGTTATAAAAACGCAAAACTCTTTAAGCTGCACGCACCAAGACCCGGGGCTC
 Consensus (2547) T GATT GCAG TT CT CA T T C GA T AAGAT T C A G A TATGGGG CTC

Section 40

(2614) 2614 2620 2630 2640 2650 2660 2670 2680
 Mouse (2325) TAGGGAACTTG--TCTTAAACAAG-GAAAAACAAGACAGAAACCAACCCCAAACAGCAACAAACA
 Cow (2199) GCGGGCTATAG--TCCATGGGATCGAAAGAGTCTGACACGACTGAGCAACTAACACTAATATGATA
 Human (2434) TCAAGTT-----TCCTAATTAT-GAATTGTCGTTCCTGGTTTTTGCCTATTTTTTCCAGT-TGAT-
 Xenopus_T (2255) TCCGTAATTTGGATCTCCATACCTTAAAGTCTACTAAAAAATTAATAAAATATTAATAAACCCATA
 Rat (2276) CAGCAGCCTCCCCAGCTTGCTGCCTTAGAACTGGCTCCATGTTCCTACTGAGCTCGTGAAT
 Consensus (2614) TCGGG T G TCCT A A GAA A TG ACAA T TTA C CT A A CAA A AATA

Section 41

(2681) 2681 2690 2700 2710 2720 2730 2747
 Mouse (2389) TAGCCGAC---TCACTCCC TAAGGCTTCCCATGCCCTTTGCTGTGACCACAGTGGCAGATGTAATTGC
 Cow (2264) TGATGGTGGAAACATGCCATTATGCAT----TTAGCAAAACCCATAGAACCCTGCAACACAAAGAGT
 Human (2492) TATTGGT-----CTTTTGAATTGTGAAT----TTTTTGTATTATGTGA-ATTTGTGAGACTTAAAACAT
 Xenopus_T (2322) GGGCTGTTT--TGCCCCCAATAAGGGGTAATTATATCTTAGTTGGGA--TCAAGTACAGGTAAGTTT
 Rat (2343) TCAAGCGTACACCTGGGGTTAAGAAC----AGAACATTGGC-AGA-CAGAATTCAACATAAAATATG
 Consensus (2681) T GGT C T C ATTA G AT TTA C TTG TG GA ACAGTG ACATAAA T

Section 42

(2748) 2748 2760 2770 2780 2790 2800 2814
 Mouse (2453) TCCTTTGGTTGATTCTTTGTTTGGCTGTTTGTTTGAGATAGGCTCTCAA-GCAGCTCCCACTGACCT
 Cow (2327) T---AACCTAATGTAAACTATGGACTTTAGTTAATAACATACCGAAGCTGACTCATCAGTTGTAAT
 Human (2549) T---TTTGCAATTAAATTCTTTTTTTTTTTTCAGACAGAGTCTCACTGTCAACCCAGGCTGGAGT
 Xenopus_T (2385) TATTATTAAGAGAAAAGGGAATCATTTTAAACCATTAAATAAACCCAAATAGGGTGTTC---TGCCCC
 Rat (2404) C---TTAAAAAATAAAAAAACAACAACAAACCCAAAAGCCTTTGCTTCAGCAGCGTCAAC-ACAGCACT
 Consensus (2748) T TT CA AT AAA TAT ATTTT TT AGACA ACCCTCA G C C C CTG ACT

Section 43

(2815) 2815 2820 2830 2840 2850 2860 2870 2881
 Mouse (2519) TGAACTTGCTACACGTAGCTATGT-GCGCTACGTACTCCTTTAGTCTTGCACTCAAGAGGCAGAGG
 Cow (2391) A-AATGTATCACACAAGTGTAAAG-TGTTAAATATAGGGAA-----ACTGGT-TGGAGGAAAGGAGT
 Human (2613) GC AATGTGGGATCTCAGTTCAG----TGC AACCTCCACCT-----CCTGGGCTCAAGCGATCCACC
 Xenopus_T (2449) AAT AAGGGGT AATTATATCTT AAGTTGGGATCAAGTACAGGT-----ACTGTTTATTATTACAGAGA
 Rat (2467) GGC A-GTCTGAGGGTGTCTGTGCGCTGTGCTACTTGGCGTCTA--AGGCCAGGCCGTGTGGGTTCCAGG
 Consensus (2815) AA GTG A C ATCT AG G G TAATGTAC C T CCTGG CT AG GA GAG

Section 44

(2882) 2882 2890 2900 2910 2920 2930 2948
 Mouse (2585) CAGTTGGATCTCTGTGCA TTTGAAGCAATCTGTTCTACAAGGTGAGTTTCAGGCCAGCCCTGGGCTA
 Cow (2450) ATCTAGAACTCTGTATT TTCTGTTCATTCTTTGTA AAC-----TAAA CTG--CT---CTA
 Human (2671) TGCCTTGGCCTCCCAAGTACTGGGATTA CAGGCA TAGCCAC-----CATGCCTGGCCA---CTG
 Xenopus_T (2511) AAAGGGAATCATTTAACCA TAAATAAAC C-----CAAT-----AGGGCTGTTCT--GCC
 Rat (2531) CAGAGCACTGGCTGTGCTCAGAGGGCCGAGCATGGAAGGAG-----AGTCATGGGGTCT--TTC
 Consensus (2882) A GAATCTCTGTA TTCT AGAA C G TA AA AGGCCTG CT CT

Section 45

(2949) 2949 2960 2970 2980 2990 3000 3015
 Mouse (2652) CAAAATGAGAGAGACCC TGTCTAA AATAA AACAAAC TCACAAA CACCCA ACCACTAAGATAGGGC
 Cow (2504) GGAAAT-AGAATCTATTACTTAA AATAA AC AATAAATTTACAGATTCATCAAGGATGTACATCTCAT
 Human (2729) TATATT-AC TTTTAATTTTACAA GTTGCA AATGTTTCTCACGATCTGTCACTTTCTTTCTTTCTT
 Xenopus_T (2560) CAATAA-GGGTAAT TATACTT AAGTTGGGATCAAGTACAGGTACTGTTT TATTATTACNNNNNNNN
 Rat (2590) CCTACGC AAA TACCCTCTCC CCAA AACAG AACAAAGCAA ACCACTACTTTGGAGCTGCA GTGAGA
 Consensus (2949) CAAAAT AGA T T T TC AAAAT A AACAAATTCACA AAT T A AT T AT

Section 46

(3016) 3016 3030 3040 3050 3060 3070 3082
 Mouse (2719) TGGAACTTGGAATTA TTTG TTTGT-GATCTTTAGTTTGAGACAAGGTTTCTCTGTGTATCCCTGGAT
 Cow (2570) TTCTGTTATCTTTGT TTTGCACTG--GTGACAG AATTTT-GACAGGTGTTCAATTTG-----ATGGGT
 Human (2795) TCCTTCTTCTCTTCT TTTCTTTGTCTTT TTTAA AATTTGAGACAGGGCC TCACTCTGTCACC CAGGCT
 Xenopus_T (2626) NNTTGCAACCAATAA--AATGAT
 Rat (2657) GAGTCTTTTAAAAAAGTGGCTTCT--ATCAGTCCTGTTTGA TTTTCTTTAATAAGT----CT-GTT
 Consensus (3016) T T TTT T TT CTTTG T A TTT GACA G TTCAAT TGT CTGG T

Section 47

(3083) 3083 3090 3100 3110 3120 3130 3149
 Mouse (2785) ---GTCCTGGAAC TCTTTGTAGACCAG-----GCTGG CCTGGAACTC-AGAAATATGCCT
 Cow (2629) CAAGTATGGT----CTTTTATTGTGTTTAA---TTGC GTTGC CCAATTGTTCTACTTAGATTGAC
 Human (2862) GGAGTGCAGTGGCAGATCATGGCTCAGTGCAGCCTTGAAC TCC CAG--GCTCAGGTGATCTTGCC
 Xenopus_T (2687) T--GTATTATGAGGTAGTGGGCA TCCAGT-----AATCC C CAGGAGCTAAAGTATCTAAGA
 Rat (2716) CTTT TGAAATGAC-TTATGATTGTCAAAT-----GTTAC C CAGG G CCAAGTGTACTGTGGTC
 Consensus (3083) GT GTGAC C T AT GTCCAGT GTT CCCAGG GCTC AGT AT T G C

Section 48

(3150) 3150 3160 3170 3180 3190 3200 3216
 Mouse (2837) ACCTCTGCTTCCCTAGTGA TAGGATTGACAGTGTGGGC-----CA--C---TGCTGTC TTTGTTT
 Cow (2689) ATGTTT---TCCAGA-TCC TTGGACTTTCCAGATTCACTTGT TATAAATCACC TGTTCA TTTCTTT
 Human (2927) ACCTCAGCC TCCAGAGTAGCTGGGAGA ACTACAGGTG CATGCCACC ATAC-CCAGCTAATTTT TTT
 Xenopus_T (2743) AACATT-----ACA--A TACAAATCATAAATATGCC C-T-----TTGTACTTCTATCT
 Rat (2773) TCGAGTG-----ACAGTGC TAAGAAACA AACCA CAAAACAAATTAACCAACAA TG GCCATAAAAC T
 Consensus (3150) ACCT TG TCCA AGT TAGGAAT ACAA ATG C T A C TG T ATTTT TTT

Section 49

(3217) 3217 3230 3240 3250 3260 3270 3283
 Mouse (2892) GTAAATCTTAACACATGTGAATGGTGGTTTTTCCTGCCGTAG-----GTCGTGAATCATTTATGTTG
 Cow (2752) GCCTGTTTTTTTCAC-GTGAATGTTGATTTTTTAAGA-TGTGG-----AACGTGGCTTTTTTTTTTT
 Human (2993) TTTTTTTTTTTGTGTGTGTGTGTGTGTGGAGA-TGGGGTCTTCCTATGTAGCCCAGGCTGGTC
 Xenopus_T (2787) ATGTTGTTCTCCCC---AAAGAGCCTATCTGATGC-TGGGT---CCCTGGATAAATGCCCTTTTTC
 Rat (2835) CCATGACACTTTGAA--A-TGTGGAGGGCCATATCGGACGTCTTT---CTAGAGAGGGGGGTTTACTG
 Consensus (3217) T TT TT TT GTGA TG GGT TTT GA TG GG CT TGTAG T TTTT T

Section 50

(3284) 3284 3290 3300 3310 3320 3330 3340 3350
 Mouse (2954) TCTGGCTCATGG-AGCCAGTATT-----GGGTATCAGATCCC-CTAGAAGTACTGATTACAGATGGGG
 Cow (2812) TTAAACATGTTG-CAAATGTTTTCTCACAACTGTGTCATTTGTT-TTCAACTTGGATA---ATGATC
 Human (3059) TTGAACCTCTGGGCTCAAGTGATCCACCCAACT-TGGTCTCCC-AAAGTGCTGGGATT---ATAGGC
 Xenopus_T (2846) CCTGCCCTTGGGCAGTCACTGAGCTTGGGGACTTATATCTACAGTGTAGTATTAGTGTTTGTATATAT
 Rat (2895) AGGGTCTCTCTGAGCCACGAAG---ACATGTATTGCTCTTCAAAAAGAACAGGGTGG-AGATTAGA
 Consensus (3284) T TG CTC TGG AGCCAGT ATC A CT T AT T CC TAGAAGTGGG T AT G

Section 51

(3351) 3351 3360 3370 3380 3390 3400 3417
 Mouse (3013) GTGAGCTTTTGTGTGGGTGCTGGGAACCAAGTCTGAACTCTCTGTTAAGAGCAGTCAGTGTCTTTAAC
 Cow (2874) ----TCTTTTGTGCCCATTTGTTGTTGTTTAGTTACTAAGTCCGTCCAACCTTTTGCCACCATTAG
 Human (3121) GTGATCCACGTGTGCTGGCCCTGTCATTTCTTTCTCAGAGAGGATAACAATTTATTGTCTACAG
 Xenopus_T (2913) ---AGTTTATGTATGTGAGTGTATAGATAGTTAAGTATAGGGTGTGGGTGC--TGGGTTTACTTGGGA
 Rat (2957) AAGATAACCTGTGACGGAGGACCAAGCAGGCTGGGGAAGCAGGAGACGTTTTCATTGTGCTTTGCTGGGA
 Consensus (3351) GATCTT TGTG C G G TGTAG T GT GTA G TGT C TT G T T CTT A

Section 52

(3418) 3418 3430 3440 3450 3460 3470 3484
 Mouse (3080) CACGGAGCCATCTCTCCAAATCCCCCTCTTTGGCCTCAGACTCACAGACC CAAGAGAACCCTCACTGAG
 Cow (2937) AATGTTTCAAATTTTGAAGGAGGTAGCCTGGAAATGTGCTTCTGGGG---AGACACATGATGTGAT
 Human (3188) AAAGTTTTAAATGTTGAAGGAGATGGCCTGGAAATATGCTTTTGGGG---AGCAACACGGTCTGAG
 Xenopus_T (2975) TGGGTTGAACTTGATGGACTCTGGTCTTTTTTCAACC--CTATGTAAGTCTGTAAGTATGTTCTGAA
 Rat (3024) GAGAAATGTAACCTGTCCAGGGCAGGGTCTGGGGGAGG-----ACGGCTGCTATTAACACTCTAGGAT
 Consensus (3418) A GTTG AA TG TG AGG T TCTTGG AA CT GG C AGAAACACG TCTGA

Section 53

(3485) 3485 3490 3500 3510 3520 3530 3540 3551
 Mouse (3147) GCGTGCAGGAAC TGCC---CAGCCATAATCTTTTAGCCAGCCTCTGTCTTTTGGCTCTGGATTCTT
 Cow (3001) CCGAGCTAGACTTGCAGATGAAGCCCAATCTCTGCCAGTCTC-GTCTTTTGTGCTCCTGATGCTC
 Human (3252) CC-----AGACATCCAGATACAGCCCAATCTCTGCCAGTCTT-GCCCTTT--GCTCCTGATTCTC
 Xenopus_T (3040) CCT-----CTTGCGGA---ACTCATTTCTCCATTATCCCCTCATTCGTG--CTCCTGGTGTGT
 Rat (3086) ACT-----ATTTACA-----GCTGCTTCTAAAATGGA-----GTCCGTTT--CTACAACGCCTT
 Consensus (3485) CC GACTTGCAGA AGCC ATTCTTCT GCCAG CTC GTCCTTTT GCTCCTGAT CTT

Section 54

(3552) 3552 3560 3570 3580 3590 3600 3618
 Mouse (3210) GA--GCTG-----AGCTGGGTCCAGCATGTATATAACGAGAGACTCCTCCTGGCCAATGTTTTGT-
 Cow (3067) CAA-GCTGAACCCAGAGCTCTCTGCTCCA-GGCTGTCCATGGAGGCGCTTGTGACCAATGTTCTGAA
 Human (3311) CAA-GCTGTACCCAGAGCTTTCTGTTCA-GCATGTACCTGGAGGCTGCTTTTGACCAATGTTTTGAG
 Xenopus_T (3096) GAAAAGAG-----AAATCCACTAACCA-GTAAAAGGAGGATTATACCTGGTGTCTTATGTAGTG--
 Rat (3133) C---GCTG-----TGGTCCGGGATGAA--CTTTTCAGGCAG--TTTTCCGTCGAAGCCATTGG-
 Consensus (3552) CAA GCTG AGCTC TG T CA G AT T CA GGAG CTCCT TG CCATGTTTTG

Section 55

(3619) 3619 3630 3640 3650 3660 3670 3685
 Mouse (3267) ATGGCATAAGCTT-TGTCTAATGGGATGACCCGGCTAAAAGAGATTAGT-GACTGCGTTGTGGATCC
 Cow (3132) ACTGGCACGGCTT-TATCTAATGGGATGAACCCGGCTAAAAGAGATTAGCAGAATGTCTTGTGGATCC
 Human (3376) AGTGGCATGGCTT-TATCTAATGGGATGAACCCGGCTAAAAGAGATTAGCAAAATGTCTTGTGGATCC
 Xenopus_T (3153) ---GCCAGAGCTTCTCCCAAATGGGATGAAGGAGATTAGAGGTATTAGGATGACGTCTTGCGAATGT
 Rat (3185) ---AGAAAAGCTGGGGAAAGTCCAAGTCCACCGCGCCGCTGGG---TCGTTCGGCCCGC
 Consensus (3619) A TGGCA AGCTT T TCTAATGGGATGAACC GGCTAAAAGAGATTAG A AATGTCTTGTGGATCC

Section 56

(3686) 3686 3700 3710 3720 3730 3740 3752
 Mouse (3332) CACTTTT-T-AATCTGCAGTGTTCGGACTGTCCCTCCTTGGCTGGGAAGGACTCTG-----CAGATA
 Cow (3198) CACTTTT--AATCTGCAGCTTTCAGGCTGTCCCTCTTGGTTGGGAAGGGAGCT-----ACAGCGA
 Human (3442) CACTTTT--AATCTGCAGCTTTCAGGCTGCCCTTCTTGGCTGGGAAGGGCGCTGAAGAAAACAACGC
 Xenopus_T (3217) CAGTTTAAACCACCTGAACACTGAGTCTCTCCCTTCTTTGGTGG-AACGGGCGC-----CCAGA
 Rat (3246) CCGCAT----TCTTGAGT-TCCAGGATGTTCTTAAAGGTTTCTCTAGGCTCTTG-----GTGAGC
 Consensus (3686) CACTTTT AATCTGCAGC TTCAGGCTGTCCCT CTTGG TGGGAAGGGCGCT CAGAGA

Section 57

(3753) 3753 3760 3770 3780 3790 3800 3819
 Mouse (3392) CGGC GGCCTAGATTAGCTCC-----G-----GCTACC GTTACTG-----
 Cow (3257) CGACGGGAGGACTGCTCCTTTCATGAGCTGTGACTCTGAGGTCCCTGCTCCACTCGAGGGTTAAC
 Human (3507) CCAGGAC CAGGACTATCCCTGCTCAAAGCTGTGATTCGAGACCCCTGCCACCACTACTG-----C
 Xenopus_T (3276) AGTAGGTGTAGGTGTTGTCCT--GCCGATTTCCCTTTCGTGATTGTGCTATTAAATATCC-----T
 Rat (3303) TGGAGATCTGCTGGGTTTCCCGACCCTTTCA-T--GATGTC--TGTGTGTA AACCT-----C
 Consensus (3753) CG GG CTGGATT GCTCC C GCTGT A T GA G C TGCTACCA TAC G C

Section 58

(3820) 3820 3830 3840 3850 3860 3870 3886
 Mouse (3426) A---GTTAACGGGGATCCCAAGCTAGGAGGCCCCAAATGGG-----CAACTCCCTGCA
 Cow (3324) AGGGGTTAACAGGGTCCCGGGCTAGGG--GG-CACAACATGGGCAGCCCCAGAGCAGCTCCCTTCA
 Human (3568) A---TTACGGGGATCC CAGGCTAGTG--GGACTCGACATGGGTAGCCCCAGGGCAGCTCCCTACA
 Xenopus_T (3335) C-CCC TT--CGGTGACTCCAGGATTCCTCTTGGCCACGTAGGGTCTCCAGTATGGAACAACGT-CA
 Rat (3359) ATTCTTT---GGGGAATTCTCAGGGCTTTGTCTTGGAAGGAGT-----CGAGGCACGGCA
 Consensus (3820) A TT ACGGGGATCCCAGGCTAG G GG CCC ACATGGG CC GCAACTCCCT CA

Section 59

(3887) 3887 3900 3910 3920 3930 3940 3953
 Mouse (3478) GCTTGGGCCCATGGTGTCTTCCC TAGACCCTAGCGGTCCAGC-CCCGGAGCT-CACTCGGATTAGG
 Cow (3389) GCTTGGACCGTCTGCACCTTCCCAAGGCCCTGAGTCTTCAGC-CTCTGGGCT-TATTGAGGTCAGG
 Human (3630) GCTTGGGCCATCTGCACCTTCCCAAGGCCCTAAGTCTCC-GC-CTCTGGGCT-CGTTAAGGTTTGG
 Xenopus_T (3398) CCTCTTGCCTCCATTATTCGAGGACTGACTGCTAATCTCC---GACAGATCT-TAATACGGAAAT-
 Rat (3412) TCT----CAATGTGCGAGCTGGCCAGGATACCCGGGAGCTTGTCTCAGAGCCATGGTCTGGCCTG-
 Consensus (3887) GCTTGGGCC TCTGCACCTTCCCAAGACCCT AGTCTCC GC CTC GAGCT TA T GGT AGG

Section 60

(3954) 3954 3960 3970 3980 3990 4000 4010 4020
 Mouse (3543) AGTGGAGCTGAACCGTGGGAGGCTG--C--TGAACGCACTCGGTAAGCATGGCGCTGCTCAAAGTC
 Cow (3454) AGTGACAGCTGTGCTGTGGGAGGCTA--CCTGGACTGCACCTGCAAGT-----
 Human (3694) GGTGGAGCTGTGCTGTGGGAAGCAA--CCGGACTACA CTGGCAAGC-----
 Xenopus_T (3459) ATTGATATCTGCTGTTTCTGCATC--CC---ACC CATTGCAACC-----
 Rat (3474) -GGCAAAGTTTGTGGGTGGCCTTCAGGGCCTGGAGAGCACCCG-----
 Consensus (3954) AGTGA AGCTGTGCTGTGGGAGGCT CC GGA GCACTCGGCAAG

Section 61

(4021) 4021 4030 4040 4050 4060 4070 4087
 Mouse (3606) AAGTTTGACCAGAAGAAGCGGGTCAAGTTGGCCCAGGGGCTCTGGCTTATGAACTGGCTGTCCGTGT
 Cow (3501) -----
 Human (3741) -----
 Xenopus_T (3501) -----
 Rat (3516) -----
 Consensus (4021)

Section 62

(4088) 4088 4100 4110 4120 4130 4140 4154
 Mouse (3673) TGGCCGGCATCGTCCTCTTCAGCTTGGGGCTGTTCTTGAAGATTGAACTTCGCAAGAGGAGCGAAGT
 Cow (3501) -----
 Human (3741) -----
 Xenopus_T (3501) -----
 Rat (3516) -----
 Consensus (4088)

Section 63

(4155) 4155 4160 4170 4180 4190 4200 4210 4221
 Mouse (3740) GATGAATAATTCTGAGAGCCACTTTGTGCCCAACTCCCTGATAGGGGTGGGGTCCTGTCCTGTGTC
 Cow (3501) -----
 Human (3741) -----
 Xenopus_T (3501) -----
 Rat (3516) -----
 Consensus (4155)

Section 64

(4222) 4222 4230 4240 4250 4260 4270 4288
 Mouse (3807) TTCAACTCTCTGGCTGGGAAGATCTGCTATGATGCCCTGGACCCGGCCAAGTACGCCAAGTGGGAAGC
 Cow (3501) -----
 Human (3741) -----
 Xenopus_T (3501) -----
 Rat (3516) -----
 Consensus (4222)

Section 65

(4289) 4289 4300 4314
 Mouse (3874) CCTGGCTGAAGCCGTACCTGGCTGTC
 Cow (3501) -----
 Human (3741) -----
 Xenopus_T (3501) -----
 Rat (3516) -----
 Consensus (4289)

Supplementary Figure 3. Clustal alignment of the Rds promoter regions from multiple species. a.
3.5kB of the 5' Rds promoter region (upstream of the transcription start site) plus the 5' untranslated region underwent Clustal alignment using Invitrogen's vector NTI.