

Supplementary information

On the genetic basis of tail-loss evolution in humans and apes

In the format provided by the authors and unedited

Supplementary Tables

Supplementary Table 1. RT-PCR primer sequences.

RT-PCR Target sites	Orientation	Sequence
Human <i>TBXT</i> : exon 8	F	CCTCATAGCCTCATGGACACCTG
	R	TCTTAACCTGAGACTGCCACTGG
Human <i>TBXT</i> : exon3-8	F	GGTGACTGCTTATCAGAACGAGGAG
	R	TACTGAGGCTGCATTTCTTCTTAACC
Human <i>TBXT</i> : exon4-7	F	CAGAACGAGGAGATCACAGCTC
	R	GGTACTGACTGGAGCTGGTAGG
Human <i>MIXL1</i>	F	GGCGTCAGAGTGGGAAATCC
	R	GGCAGGCAGTTCACATCTACC
Human <i>ACTB1</i>	F	CACCATTGGCAATGAGCGGTTC
	R	AGGTCTTTGCGGATGTCCACGT
Mouse <i>Tbxt</i> : exon4-7	F	CCAGAATGAGGAGATTACAGCCCT
	R	GGATACTGGCTAGAGCCAGTAGG
Mouse <i>Actb1</i>	F	CATTGCTGACAGGATGCAGAAGG
	R	TGCTGGAAGGTGGACAGTGAGG

Supplementary Table 2. CRISPR targeting sites and guide RNA sequences.

Targeting purposes	PAM	Guide RNA sequence	Locus (hg38/mm10)
Delete <i>AluY</i> in human <i>TBXT</i>	TGG	AGACTGTGCCCACTCTCGGG	chr6:166161988-166162010
	TGG	GATAGACCATAAAGATCCCC	chr6:166161557-166161579
Delete <i>AluSx1</i> in human <i>TBXT</i>	GGG	CACAGTAGTTGTCCCGCTAG	chr6:166163730-166163752
	AGG	GAATGGGGGGAGCTTAAACC	chr6:166163290-166163312
Delete <i>Tbxt</i> -exon6 in mouse <i>Tbxt</i>	TGG	ATTTTCGGTTCTGCAGACCGG	chr17:8438362-8438384
	GGG	CAAGATGCTGGTTGAACCAG	chr17:8438920-8438942
Insert <i>AluSx1</i> into mouse <i>Tbxt</i> intron 5	GGG	CTACCCGATGAGCCACAATA	chr17:8437898-8437920
Insert <i>AluY/RCS</i> into mouse <i>Tbxt</i> intron 6	TGG	TAGAACTCAAGCCCTTAGTG	chr17:8439161-8439183

Supplementary Table 3. Long DNA oligos used in CRISPR/Cas9-mediated DNA deletion experiments. Target sites correspond to the CRISPR targeting purposes indicated in Supplementary Table 1.

Delete <i>AluY</i> in human <i>TBXT</i>	A*C*T*ACACCAGTGATTCTCCAAATACGGTGCCAGGCCAGAGCCTCAGCA CCACCC CCCTGGCCTAATTCTCTCTATAACACTGTATATGTCTAGACTTAATT TTGTC*T*G*G
Delete <i>AluSx1</i> in human <i>TBXT</i>	C*A*G*TGCTGCCTGGAGAATTGTTAGTAGTTTTGGAAATTGAAGCCACAGTA GTTGTCCCGC ACCAGGAGAGTGAGCAGTAAAGGGTCTACCCCCAGCTA GGAAGGCACCTCCCGTC*T*C*T
Delete <i>Tbxt</i> -exon6 in mouse <i>Tbxt</i>	T*T*T*ATTCTAGAGCCCATTAACATATCACTCCTGCTCACTTGGTAGAAAGCC ACCG CAGGGGTCCCCAAGGAGGCTTTCAATTCATATCCATGTGCCTCAG AACATG*C*C*C

Note: “|” indicates a junction site; “*” indicates phosphorothioate bond modification sites.

Supplementary Table 4. Genotyping PCR primer sequences.

PCR Target sites	Orientation	Sequence
Delete human <i>TBXT-AluY</i> : read through	F	CAGCCAGGCTCAAGAATTCC
	R	GACTTCCTAACCCAATAAGGTCC
Delete human <i>TBXT-AluY</i> : left junction	F	CAGCCAGGCTCAAGAATTCC
	R	GTGTTCCCTAATATTGGAGCATGC
Delete human <i>TBXT-AluSx1</i> : read through	F	TCCTAGGCTGATTGAACAACCAG
	R	CAAGGCAGGTGAGCTTTCC
Delete human <i>TBXT-AluSx1</i> : left junction	F	TCCTAGGCTGATTGAACAACCAG
	R	TTAAGCTCCCCCATTCC
Delete mouse <i>Tbxt-exon6</i> : read through	F	GCAGTCTGAGTCCTACCTGTG
	R	TGTCAGTCTGGTTCTACACCTGGAGAGTCTTTGATC
Delete mouse <i>Tbxt-exon6</i> : left junction	F	GCAGTCTGAGTCCTACCTGTG
	R	GTACAGGACCTACTTGGAGAGC
Delete mouse <i>Tbxt-exon6</i> : right junction	F	GACAGGACTGAGTCTCAAGC
	R	TGTCAGTCTGGTTCTACACCTGGAGAGTCTTTGATC
Insert <i>AluSx1</i> in mouse <i>Tbxt</i> : read through	F	CTCTGTCCCTAAACAATGATCAGG
	R	GACTACCCGATACAATACTTGAGAC
Insert <i>AluY/RCS</i> in mouse <i>Tbxt</i> : read through	F	TGGAGCCGTGGTTTGATGAAC
	R	CAGACAAAGGTTGGTCTAAACAGAC