

Supplemental Materials.

Supplementary Table 1. PCR primers used in this study

Gene	Purpose	Forward primer	Reverse primer
GAPDH	RT	CATGGCCTTCCGTGTTCTTA	GCCTGCTTCACCACCTTCT
Vapa	RT	GCAGATCCTGGTCCTCGA	CGAGGTGCTGTAGTCTTCACT
Txndc2	RT	GACAGCGTCCAATCCAAGG	CTTCACTCTCCTTTGACTGAACG
Rab31	RT	GCGATTGCTGGGAACAAGTGT	GCGGCTGATTCCTTGAAAGAG
Ppp4r1	RT	AGTCCAGGATGTTGTACCACA	TCGTAAGTCTCCCTCAAGCA
Ralbp1	RT	CACCGTGCAGATCAGCAATCG	ACCAGCGCAGAGGTCTTG
Twsg1	RT	ACTGTGTCGGTATGTGCAACC	CCTGAACAGGGACGGAATGG
Ankrd12	RT	GACCGAGGTGATATGGGCAAG	CCTGGGTCTGAATCTGTGTCTGA
Ndufv2	RT	GCAGAATGGATGGCTACCTATCTC	CCTGGATATGGTACTCCCAACTG
Rab12	RT	GCAGGGCAGGAGCGATT	TGGCAAGTCATCGAACGTCTC
Ptprm	RT	CTGTCGGAGCAACCTATCTGTG	CTGGCTGCCGATCATTCCA
Lrrc30	RT	GAACCTGGAGGTGCTGAG	CAGGCACTGGATGCTCTC
Lama1	RT	CGTGGATGGCGTCAAGTTCA	GAGGTGCAGATGACTTCGTTGT
Arhgap28	RT	CACGGCGACCCACATCAT	GCCTCATTATCCTTCTGACCTG
Epb4.1l3	RT	CTGGTAGAGGAGAGGCATGTGAT	GCGATCTGTGGGTGTGGATT
Zfp161	RT	TCACCTCAAGGACCACGAGA	GTCTCACTCTGGATGGCACTG
Dlgap1	RT	ACTCCTTGTACACCACTCAGAC	CGCACTCGGCCTGGAA
Tgif	RT	CAATCTGCCAAGGAGTCAGT	GGCGTTGATGAACCAGTTACAG
My12b	RT	GCCTTCGCTTGCTTTGATGAG	CATCCACTTCCTCGTCTGTGA
Myom1	RT	CGCCGCCAGGAGTCA	GCTCCAAGACTGTAGGTCTGTGA
Lpin2	RT	GCAGTGCTGTGGATCTTCAC	GAGGTGGCAAGATAAGCAGGTA
Emilin2	RT	GAGAAGGTCGTCCGACTCA	TCTGCCATCATCTTGAATGGTGT
Smchd1	RT	AGAAGCTGCTGGTGGAACTTA	CCTCCATGCTGACTGATATGTGA
Ndc80	RT	CCTTGGTGTGGCTCATAGACT	CCAGAGCTGCCCATCATCA
Emilin2	C	CAGCCTTGTGGGGCTC	TCT TCC CTT CCT GGT CTC C
Emilin2	S	GCAGTGGAACCAGGTCAG	—
Emilin2	S	GAGCAGGTCCTAATGGAGTTG	—
Emilin2	S	GTGTAAGGAGAGTGCTCACG	—
Emilin2	S	CTGCCTCGGGGAGTG	—
Emilin2	P	CACACATGGGCACTCACATAT	GCGAAAGTTGAAGACGCAGG
Emilin2	PS	GTTTCATGAACGGATTATGTCC	—
Emilin2	5N	CAAATGACAGTTTGCAGCTGC	GCGTCCAGCGACTGGGTG

RT: real-time; C: coding; S: sequencing; P: promoter; PS: promoter sequencing; 5'-noncoding; 5N

Supplementary Table 2. Comparison of SNPs in *Emilin2* in B6, 129/svJ, and A/J Mice

Position	B6	129/svJ	A/J	Amino Acid Change	Position	B6	129/svJ	A/J	
Non-synonymous					Synonymous				
71604573	T	C	C	T/A	71602195	A	G	G	
71605329	T	C	C	T/A	71604484	A	G	G	
71605888	T	C	C	Q/R	71622823	C	T	T	
71623085	G	A	A	A/V	71622847	C	T	T	
71623358	A	C	C	V/G	71623615	G	A	A	
71623623	T	C	C	T/A	71623660	C	T	T	
71624297	C	G	G	S/T	71623822	C	T	T	
71624328	C	T	C	A/T	71624089	G	A	A	
71624526	G	G	A	L/F	71624224	A	G	G	
71624555	A	G	G	V/A	71624530	C	T	T	
71624556	C	T	T	V/I	71624608	A	G	G	
71624586	A	G	G	S/P					
71630050	A	G	G	S/P					

The SNPs were retrieved from the Sanger Mouse Genome project – SNPs. Amino Acid Changes are indicated as B6 vs. A/J or 129/svJ

Supplementary Figure 1. Sequence alignment of EMILIN2.

The amino acid sequences were retrieved from NCBI protein database. Homo sapiens (human), NM_032048; Rattus norvegicus (Norway rat), XM_237520; Bos Taurus (cattle), NM_001143869; Equus caballus (horse), XM_001915828; Polymorphisms at the conserved sites in mammals are highlighted.

Supplementary Figure 2. Rebleeding in 129/svJ mice.

Rebleeding (clot stability) time in 129/svJ mice is longer than for B6 mice. Polymorphisms are similar in A/J and 129/svJ mice.

C57BL/6J IHSLEDRLG--IVLQAAN----SSDVELTPMGPALPEQPGAENEQVLMELSRLKDKVQVV
A/J IHSLEDRLG--IVLQAAN----SSDVELTPMGPALPEQPGAENEQVLMELSRLKDKVQVV
Homo_sapiens IQSLEDRLGSVLLQMTNN---TGAE LSPPGAALPGVSGSDERVMELNHLKDKVQVV
Bos_taurus IQSLEERLGSALLEMVNG---SEMVPAP-VAAPPTVSGAGPPQVMMLKRLKDKVQVV
Equus_caballus IQSLEERLGSVLLLEMAN----TDAELTAP-ASALPGVSGAGHEQVMMLSHLKNKVKVV
Rattus_norvegicus IHSLEDRLGIILQVTNGSDLELTPVGPALSGQPQPGAENEQLLRELSRLKDKVQVV
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C57BL/6J EDFCLQSLP---HGIDGALPSVED-LTHVLSLLES LNDTMHRQFQETSHSIQKLQEDVN
A/J EDFCLQSLP---HGIDGALPSGED-LTHVLSLLES LNDTMHRQFQETSHSIQKLQEDVN
Homo_sapiens EDICLLNIQKPHGMEGALPNREDRAVRDSLHLLKSLNDTMHRKFQETEQTIQKLQDQDFS
Bos_taurus EDMCLQNFGRGEPGMEDTLRNGGE-----MVSLRLSLNDTMGGKFQDTERS IQRLQDQDFS
Equus_caballus EDICLQNFQGEPHGIEGTLPSGEDHTMGNSLSLLKSLNDTMHRKFQETEHSIQKLQDQDFS
Rattus_norvegicus EDICLQSLP---HGIDGALPSGED-LTHVLSLLES LNDTMHRQFQETSHSIQKLQEDQDFS
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C57BL/6J ALHSQLNHSECTGTYLQNGVSDSRTGDSMEASGFTKTGEQERTVGTVPSPGTPAAPCCGQ
A/J ALHSQLNHSECTGTYLQNGVSDSRTGDSMEASGFTKTGEQERTVGTVPSPGTPVAPCCGQ
Homo_sapiens FLYSQLNHTENDVTHLQKEMSNCRAGENAGMGRFTKVGEQERTVDTLPSQPHPVAHCCSQ
Bos_taurus FLYSWLNHTDDHLRRLQNELSGGRGGKKAAGGGWSKVGEPRTEAPLPSQPAPVAHCCDQ
Equus_caballus FLYSQLNHTEDDVNHLQKELSSCREGRNTGVDGFSKEDEQERTVEPLPSQDPMHCCSQ
Rattus_norvegicus ALYSQLNHSEYTGTRLPNGVS-----DSMEASGFTKTGEQERTVGTVPSPGTPAAPCCGQ
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C57BL/6J LEERWQKLQNLAEALDTCESAHGVQSGVSAIEGRVFQLEQTCRRLDTISGSLQRIKEG
A/J LEERWQKLQNLAEALDTCESAHGVQSGVSAIEGRVFQLEQTCRRLDTISGSLQRIKEG
Homo_sapiens LEERWQRLQSQVISELDACKECTQGVQREVSVMVEGRVSHMEKTC SKLDSISGNLQRIKEG
Bos_taurus LEGRWQRLQDLVLSLDTCKEKTHGVQREVSVDVDRVSHVEKTC SKLDSISGSLQRIKEG
Equus_caballus LEERWQRLQGVLSLDTCKENTHGVQREVSVDVDRVSHMEKTC SKLDSISGSLQRIKEG
Rattus_norvegicus LEERWQRLQNLAEALDTCESAHGVQSGVSAIEGRVQLEKTCRRLDAISGSLQRIKEG
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C57BL/6J LGKHVGS L WNCIRQMNGTLKSHSRDISGLKNSVQQFYSHVFQISTDLQDLVKFQPSATEE
A/J LGKHVGS L WNCIRQMNGTLKSHSRDISGLKNSVQQFYSHVFQISTDLQDLVKFQPSATEE
Homo_sapiens LNKHVSSLWNCV RQMNGTLRSHSRDISGLKNSVQQFYSHVFQISTDLQDLVKFQPSAKAP
Bos_taurus LNKHVNSLWSCIRQMNGTLRTHSREISSLKNSVQQFYSHVFQISADLQDLIRFQPSAKTP
Equus_caballus LNKHVSSLWSCIRQMNGTLRSHSRDIAGLKNSIQQFYSHVFQISTDLQDLIKFQPSAKAP
Rattus_norvegicus LGKHVGS L WNCV RQMNGTLRSHSRDISGLKNSVQQFYSHVFQISTDLQDLVSGFQPSATEE
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C57BL/6J PSEATEGPGSKTPLESTRPSEEAPEPPRLTPLPEDPAGPPQTGQPPVLPQRPLQPPPLP
A/J PSEATEGPGSKTPLESTRPSEEAPEPPRLTPLPEDPAGPPQTGQPPVLPQRPLQPPPLP
Homo_sapiens --SPPPPAEAPKEPLQPEPAPPR-----PSGPATAEDPGRRPVLPQRPPPE
Bos_taurus --QPPPRGKTPEDVGKPSAEAPTELSTPVLTPLLPPSTPSPRPDPGQKPVLPKRRPPP
Equus_caballus --APPAP--WPSAQRPPRSAAAEEAEPRAAAEEAREPGQQLPAGQPPVLPKRRPPSLPPP
Rattus_norvegicus PLEATQGPSKTPLESTRPLEEAPEPPRLTPLPEHPAGPPQIGQPPVLPQRPLQPPPLP
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C57BL/6J AWPGRGTGLPFLPGSSGVIMETGEAGPPGRMGVSGRGLPRGVDGQMGQGP IHSSEGYAGAP
A/J AWPGRGTGLPFLPGSSGVIMETGEAGPPGRMGVSGRGLPRGVDGQMGQGP IHSSEGYAGAP
Homo_sapiens RPP-----QPPGSTGVIAETGQAGPPAGAGVSGRGLPRGVDGQMGQGP IHSSEGYAGAP
Bos_taurus LRPGWGTGLPFLPGSTGVIMETGEAGPPGRMGVSGRGLPRGVDGQMGQGP IHSSEGYAGAP
Equus_caballus LRPGWGTGLPFLPGSTGVIMETGEAGPRG--GGVSGRGLPQGVDDGQMGQGP IHSSEGYAGAP
Rattus_norvegicus AWPGRMGLPVLPGSSGVIMETGEAGPPGRMGVSGRGLPQGVDDGQMGQGP IHSSEGYAGAP
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C57BL/6J GYPKSPPVTPGVPLPALVSFSAGLTQKFPFSDGGVVLFNKVLVNDGDVYNPNTGIFTAP
A/J GYPKSPPVTPGVPLPALVSFSAGLTQKFPFSDGGVVLFNKVLVNDGDVYNPNTGIFTAP
Homo_sapiens GYPKSPPVASPGAPVPSLVFSFSAGLTQKFPFSDGGVVLFNKVLVNDGDVYNPNTGIFTAP
Bos_taurus GYPKSPVAPSPGAPVPSLVFSFSAGLTQKFPFSDAGVVLFNKVLVNDGDVYDPSTGVFTAP
Equus_caballus GYPKSPPVASPGLPAPSLVFSFSAGLTQKFPFSDGGVVLFNKVLVNDGDVYNPNTGIFTAP
Rattus_norvegicus -----GVSLPALVSFSAGLTQKFPFSDGGVVLFNKVLVNDGDVYNPNTGHTNDNL
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C57BL/6J YDGRYLITATLTPERDITYEAVLSVSNASVAQLHTAGYRREFLEYHRPPGAVHTCGGPGA
A/J YDGRYLITATLTPERDITYEAVLSVSNASVAQLHTAGYRREFLEYHRPPGAVHTCGGPGA
Homo_sapiens YDGRYLITATLTPERDAYVEAVLSVSNASVAQLHTAGYRREFLEYHRPPGALHTCGGPGA
Bos_taurus YDGRYLITATLTPERDAYVEAVLSVANASVAQLHTAGYRREFLEYHRPPGAPHTCGGPGA
Equus_caballus YDGRYLITATLTPERDAYVEAVLSVSNASVAQLHTAGYRREFLEYHRPPGALHTCGGPGA
Rattus_norvegicus NDFLLSEMVLLGCLPPTLQPTLAQLGSRCWRCLPGT-----
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C57BL/6J	FHLIVHLKAGDGVNVVVTGGRLAHTDFDEMYSTFSGVFLYPFLSHL
A/J	FHLIVHLKAGDGVNVVVTGGRLAHTDFDEMYSTFSGVFLYPFLSHL
Homo_sapiens	FHLIVHLKAGDAVNIVVVTGGKLAHTDFDEMYSTFSGVFLYPFLSHL
Bos_taurus	FHLIVHLKAGDGVNIVVVTGGRLAHTDFDEMYSTFSGVFLYPFLSHL
Equus_caballus	FHLIVHLKAGDGVNIVVVTGGRLAHTDFDEMYSTFSGVFLYPFLSHL
Rattus_norvegicus	-----

Footnote

Species sequence comparison of Emilin2. * represents identical residues; : represents conserved substitutions; . represents semi-conserved substitutions. - represents gap. Amino acid polymorphisms in A/J and B6 at consensus residues are highlighted in dark gray and at nonconsensus residues in light gray.

