

Supplementary File S1 DNA alignment of the U1-U1 clones from *Ensis* species. Regions shaded in green are partial RNA coding regions of U1 small nuclear DNA. Light blue and grey shaded regions are similar to delta and gamma nontranscribed spacers from the species *E. directus* (see main text). The fuchsia region corresponds to the RNA coding region of 5S ribosomal DNA (5S). Grey region is possibly an old pseudogenised 5S copy, as it is similar to the 5S region flanked by the arrows. Dots represent residues identical to those of the first sequence, dashes indicate alignment gaps, and base substitutions are indicated by the respective base.

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*      20      *      40      *      60      *      80      *      100
Ensis macha : CGATAGCCCCAAATGTGGGCTACTCGGGTACGCAATTTATACGTGTGGGGTCTGCGTTCGCGCTAACCCCTGTAAACCTATCTAACTAATTGAAAAAT
Ensis magnus : .....T.....C.....TA...A.G.A...ACAT..G.G
Ensis ensis : .....T.....TA...A.G.A...ACAT..G.G
Ensis minor (Chenu): .....T.....G.A...ACAT..G.G
Ensis siliqua : .....T.....G.A...ACAT..G.G

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*      120     *      140     *      160     *      180     *      200
Ensis macha : AACACAC-TAAAACGTCACGTAGACGTG-ACGAGCCGTATAATGGGAACTGGCAAAATGGCCAGTATCAGACCAGCAGTAACAACGAACGTCTTCGCAA
Ensis magnus : ...T.G.ACTG.T.AC.GTAC-.TT...C.....G.C.C.GGC.A...A.T..CG...TT...G.....-A.GT.T..GCT...T.----.ATG.
Ensis ensis : ...T.G.ACTG.T.AC.GT.C-.TT...C.....G.C.C.G.C.A...A.T..CG...TT...GC.....-A.GT.T..GCT...T.----.ATG.
Ensis minor (Chenu): ...T.G.ACTG.T.AC.GT.C-.TT...C.....G.C.C.G.C.A...G..T..CG...TT...C.....-A.GT.T..GTC..T.----.ATG.
Ensis siliqua : ...T.G.ACTG.T.AC.GT.C-.TT...C.....G.C.C.G.C.A...T..CG...TT...C.....-A.GT.T..GTTT..T.----.ATG.

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*      220     *      240     *      260     *      280     *      300
Ensis macha : GTAAATAAAGTCAAAGTACGAAATGTGCAGTAAACAACAGCATATAGCTTCGGTATCTTACTCCGGTC-TGTTCAAGTTCAAATAGGCCTCTTAAACAGC
Ensis magnus : .....T...C..AG..A.....C.....G...T.....T..AG.....G.C..G.....T...G...GCG
Ensis ensis : .....T...C..AG..A.....C.....G...T.....T..C.....G.C..G.....T...G...CG
Ensis minor (Chenu): .....T...C..AC..A.....C.....G...T.....T.....G.C..G.....T...C...CG
Ensis siliqua : .....T...C..AC..A.....C.....G...T.....T.....G.C..G.....T...C...CG

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*      320     *      340     *      360     *      380     *      400
Ensis macha : TTCTGATGTCTACGGCCATATCACGTTGAAAACACCGGTTCTCGCCCGATCACCGAAGTTAAGCAACGTCGAGCCCGGTTAGTACTTGGATGGGTGACCCG
Ensis magnus : .....G.....
Ensis ensis : .....G.....
Ensis minor (Chenu): .C.....
Ensis siliqua : .C.....A.....

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*      420     *      440     *      460     *      480     *      500
Ensis macha : CCTGGGAATACCGGTGCTGTAGACATCTTTT-----TTTTTCTTTTTTTT---TTCCGTGTACTTGCTGGTGGG-----TGAAT
Ensis magnus : .....C.T..GCAAAAATTTAA...CG.G.A....TT-.TTTA..C.T..AT.T.ATTTT--TTTTCTTTTAT..C
Ensis ensis : .....C.T..GCAAAAATTTAA...G.G.G....TT-.---A..C.T..AT.T.ATTTTCTTTTCTTTTAT..C
Ensis minor (Chenu): .....C.T..CCAAAATTTAA...G.G.....TTT..TTTA..C.T..AT.TTATTTT-----TAT..C
Ensis siliqua : .....C.T..CCAAAATAA...G.G...-----TTTA..C.T..AT.TTATTTT-----TAT..C

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*          520          *          540          *          560          *          580          *          600
Ensis macha      : ATTCATTTTACTGCCTTCTAATACAATTAATCTATTTGTCTGGTGTCTAGACAAGTCTCGT-----GGGTGTTATG-----TTCGCAGCACCGTTAATC
Ensis magnus    : ...CC.GC...TG..GG.GGGGT..AC.T..GC..GACGGTT...T.TT.T.CT.TCG.CTATTAAAC...G.CTGACGC...A...T.G..C..
Ensis ensis     : ...CC.GC...TG..GG.GGGGT..AG.T.TGC..GACGGTT...T.TT.T.CT.TCG.CTATTAAAC...G.CTGACGC...A...TAG..C..
Ensis minor (Chenu): ...CC.GC...TG..GGGGGGT..AG.T..GC..ACAATC...T.TT.T.CT.TCG.CTATTAAAC...G.CCGACGC...A...TAG..C..
Ensis siliqua  : ...CC.GC...TG..GG.GGGGT..AG.T..GC..ACGATC...T.TT.T.CT.TCG.CTATCAAAC...G.CCGACGC...A...TAG..C..

*          620          *          640          *          660          *          680          *          700
Ensis macha      : ACCTTAGTATAGAGGTTAAGCAACGCCTTGTGC-CGTCAGTTCTTGGATGGGTTTCC-TTCGAATCGGCCGGGTAATG-TATAACATTACATTGTCTGCT
Ensis magnus    : .A.G..T..CT..C.....T.TT....C.CG.....A.....GA-.G..T.CGAT.....CC..A.G.C.A...C-.T.T.--.
Ensis ensis     : .A.G..T..CT..C.....TT....C.-G.....A.....GAA..G..T.CGAT.....CC..A.G.C.A...C.G..T.TC--C
Ensis minor (Chenu): .A.G..T..CT..A.....T....C.-G.....A.....GGA..G..T.CGAT.....CC..A.G...A...C.G..T.T.T.C
Ensis siliqua  : .A.G..T..CT..A.....T....C.CG.....A.....GGA..G..T.CGAT.....C-.A.G...A--T.G..T.T.--C

*          720          *          740          *          760          *          780          *          800
Ensis macha      : TTTTTTTTCTTT--TCAAGTTGTAATGAGTTTCGTTCTCGTTGTGCTTTGT--TTGCGTGCAGCACCAGGAACAAGGGAATACAACAAGTACGTA
Ensis magnus    : C..CA.G.T--..TGG.G...GCG..T.AC--A-.G...GCACA.AC--ACAGCA.ACA.....ACAC.CAC.C.AC.----C.C-----
Ensis ensis     : CC.CA.G.TC..--.TTG.G...GCG..T.AAG-A-.G...G..AA.AACAACAACAACA..A..A.AC.....CAAC..C.AC.C..GC..C.ACA.
Ensis minor (Chenu): CC.CA.GCT...TA.TTG.G...GCG..T.AAG-AA.G...GGTAA.AACCA-ACAA.CAA..A..A.AC.C...CAAC.CC..C.....C.CC..CA.
Ensis siliqua  : CC.CA.GCT...-A.TTG.G...GCG..T.AAG-A-.G...G.ACA.AAC-----A.CAA..A..A.AC.C...CAAC.CC..C.....C.CC..CA.

*          820          *          840          *          860          *          880          *          900
Ensis macha      : CAACAATGTTTTTCGCGAATAAAAAATTATACACATGCACTGAAATATTGATTCTGTTGAATATTGGTTTCGATGATTGCTTCTGGTGATGGATTGCTTGAT
Ensis magnus    : ---.CGAC-----A-.GC..C.GCA.C.ACA.C.G.A...T..T..G.G.A...-----TA.A...G.AA.TGAAA...AT...AA-.C
Ensis ensis     : ....CCACCACCAA-.C..C.GCA.C..CA.C.G.A...T..G.....G.A...-----TA.A...AA.TGAAA...AT...AA-.C
Ensis minor (Chenu): .....CA------.C.GC..CA.C.ACA.C.G.A...T..T.....G.A...-----TA.A...G.AA.TGAAA...AC...AA-.C
Ensis siliqua  : .....CA------.C.GC..CA.C.ACA.C.G.A...T..T.....G.A...-----GA.A...G.AA.TGAAA...AC...AA-.C

*          920          *          940          *          960          *          980          *          1000
Ensis macha      : CGATTGATTGAGT-TGATTGATTGATTGAT-TGATTGATTGATTGACTGACTTCCCTTCTCTATCTTCATACAACAACATACATACATACATACATA
Ensis magnus    : T...C.A.ACA.G.A.A...GA....CGT.....TGA.T.GAT----GAA..GA.TGATTG.TG-----
Ensis ensis     : T...C.A.A.A.G.A.A...GA....CGT.....TGA.T.GAT----AA..GA.TGATTG.TG-----
Ensis minor (Chenu): T...C.A.A.A.GGA.A...GA....CGT.....TGA.T.GATT.GA.GAA..GA.TGATTG.TTG-.TG..TG..TG..TG..TG.
Ensis siliqua  : T...C.A.A.A.GGA.A...GA....CGT.....TGA.T.GATT.GA.GAA..GA.TGATTG.TTG-.TG..TG..TG..TG..TG.

*          1020         *          1040         *          1060         *          1080         *          1100
Ensis macha      : TACATACATACATACATACATACATACATACATACATTTCTTTTCTTTTCTACAGGGCTTCGAAGCAAAGACGTGTGACCCTGGCGACGTTCC
Ensis magnus    : --T..TA..GGC.G---G...TAT.TTT...GGCGGGACAAAGAACACGGCCA.G...A.CAC.G.G.A...TTCGACT.T.---.A.ATG....-
Ensis ensis     : --T..TA..GGC.G---G...TAT.TTT...GGCGGGACAAAGAACACGGCCA.G...A.CAC.G.G.A...TTCGACT.T.---.A.ATG....-
Ensis minor (Chenu): .GT..CA..GGC.G---G.C.TA..TTT...GGCGGGACAAAGAACACGGCCA.G...A.CAC.A.G.A.G.GTCGACT.T.---.TA.ATG....-
Ensis siliqua  : .GT..CA..GGC.G---G.C.TA..TTT...GGCGGGACAAAGAACACGGCCA.G...A.CAC.A.G.A.G.GTCGACT.T.---.TA.ATG....-

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*      1120      *      1140      *      1160      *      1180      *      1200
Ensis macha      : ATGCTTGAGTAGGTACGTCATCGTTTAAACATTCCCTCCACTTTTCTCCTTATTTGCCGGCCTTCACATTCTGCTTACGGGTAGTCTATTTAGAACGTTGT
Ensis magnus    : -.A.G...---...T..AG.....TT..GT....GT.G.AT.GA.A.G..TTGC.T...T.....A..T..C..T..---CCA.G.A.....
Ensis ensis     : -.A.G...---...T..AG.....T..GTA...GT.G.AT.GA.A.G..TTGC.T...T...A..T..C..T..---CCA.G.A.....
Ensis minor (Chenu): -.AA.C...---...T..AG.....G....GT.G.AT.GA.A.G..TT.C.T...T.....A..T..C..T..---CC.AG.A.....
Ensis siliqua   : -.AA.C...---...T..AG.....T..G....GT.G.AT.GA.A.G..TT.C.T...T.....A..T..C..T..---CC.AG.A.....

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*      1220      *      1240      *      1260      *      1280      *      1300
Ensis macha      : GAAACGTTTGTACCAGACAC-----AAGTTGTGTCCGAAGCAGTTGACTAGTCCTTGTCAGATACTGCTCTCGTGGTAAAAACGATAGAT
Ensis magnus    : .....A.T....CA...CGCACACCAACGTC.C.....C.....A..T.T...T.G..A.T...TC..A.C.....C.G...T.A....
Ensis ensis     : .....AAT....CA...CGCACACCAACGTC.C.....C.....A..T.C...T.G..A.T...TC..A.C.....C.G...T.A....
Ensis minor (Chenu): .....A.T....CA...CGCACACCAACGTC.C.....C.....A...A..T.TA..T.G..A.T...TC..A.C.....C.G...T.A....
Ensis siliqua   : .....A.T....CA...CGCACACCAACGTC.C.....C.....A...A..T.TA..T.G..A.T...TC..A.C.....C.G...T.A....

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*      1320      *      1340      *      1360      *      1380      *      1400
Ensis macha      : TGTATCACTAAATTGAAAAATCAGTGGTGTGGAGTCAATTCCGAAAA-TCACTGTCCGACACGTCGGGCCGAATAATACCCTTGTGTGAAAAGGTATGCAC
Ensis magnus    : AAA.A-...T....CC.TT...A.....T.CGA...AA..A..CA.A....C...T.....CGA.AGCT.C.C.....GT...G.
Ensis ensis     : AAA.A--...T....CC.TT...A.....T.CGA...AC..A..CA.A....C...T.....CGA.AGCT.C.C.....GT...G.
Ensis minor (Chenu): AAA.A-...T....CC.TT...AT..C.....T.CGA...ACA.A..CA.A....C...TT.....CGA.AGCT.C.C.....GT...G.
Ensis siliqua   : AAA.A-...T....CC.TT...AT..C.....T.CGA...ACA.A..CA.A....C...T.....CGA.AGCT.C.C.....GT...G.

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*      1420      *      1440      *      1460
Ensis macha      : GTGCATAGGAAGGCATACTTACCTGGTACAGAGAATACCGTGATCAATCAGGCGGTTTCTCC
Ensis magnus    : A....G.C..A.. .....GA.....CC.....
Ensis ensis     : A...C.G.C..A.. .....GA.....CC.....
Ensis minor (Chenu): C....G.C..A.. .....G...GA.....CC.....
Ensis siliqua   : C....G.C..A.. .....GA.....CC.....

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