

A

>Blag 2

```
GATCAGTGATGGTGAGTGCCTGTGTAAGATGACGTGCGAATGCGACCCCGCTGTTACTTAAACATCATTATACTTGTGATATCTTCAAACACTACTAC
AATTTATGTTGGATTTTCTCCGTGAAGACTGACTTCTCTCCTTAGACATTGTTTTACTCATGATATCAGATTCTGGAGGACCTTCGTTACCATCTAA
TGACGGTAAGACTATTGCTTTAGTCTCTTGCAAGATATGTGGAAAAAGTTTTACTAGACATGGAATTAATATCCATATTGCTAGAAGCCATAGACAT
TCCCAAGTTTTGATAGACATTGATAAGCCTACTGATTCAATTTTATCAGAGACTGTAACTTCTCACCTTCTGACCCTATTGAATGCCAGGATAATA
TCCATCTTAATACTAATTCATCTAACAATGAGAAAGTCATTCGTAACAATTCGAATGCATCAAGTATACATCTAATAGATGGTTCATTAATTGGTAC
TCCCTCTGACTCTTCTCCAGCTGTTTCGCAAGCTCAATGTCCCATTTGTGGAGGTTTCATTTAACGGATCTAAGGGTGTCAATATTTCATATTAGTCGA
TCGCATCCCCACATTCATAGATCGACATTAGTTACAAATTTAACTAAAAATGCGTCCCAGCCGCTCCTTGATGAGCAAGCTGATAGGGGTAGTTCTA
GTAATTCAGAATCCAGTCAACCTGACTCAGGTTTTAACATAGCCCTGAATGAGTGGAAAACAAAATTGTTTCGCACTGCAACTGCAATGACTCTGA
TTTCGATAACATGGTCCAGGATTTTTCACACTTCTTAAGTACTAGCATCAATCTTTTACCCGGACCTCGACATCCCGCAACCAAGTACTATGAAGCC
CGCAGGAAACGACGTCTCGCAACAGCAGAAAAAGAACTACAATAAGTCCT
```

>Blag 6

```
ATTACGTTTCAACAAGAGCTGTGCTAAGCTTCAAAAAATGTGAAATTCATCGATAAGAATTTAATTCAGTGCTGTGAAAATACCGTTGGTAATTCGATC
AGTGAAGGTGAGTGCCTGTGTAAGATGACGTGCGAATGCGACCCCGCTGTTACTTAAACATCATTATACTTGTGATATCTTCAAACACTACTACAA
TTTTATATTGGATTTTCTCCGTGAAGACTGACTTCTCTCTTAGACATTGTGTTACTCATGATATCAGATTCTGGAGGACCTTCGTTACCATCTAATG
ACGGTAAGACTATTGCTTTAGTCTCTTGCAAGATATGTGGAAAAAGTTTTACTAGACATGGAATTAATATCCATATTGCTAGAAGCCATAGACATTC
CCAAGATTTGATAGACATTGATAAGCCTACTGATTCAATTTTATCAGAGACTGTAACTTCTCACCTTCTGACCCTATTGAATGCCAGGATAATATC
CATCTTAATACTAATTCATCTAACAATGAGAAAGTCATTCGTGCAGTCAATAATGATGAGAAAGATAAAAGTGATAACAATATTATTAATAAATACAT
CTTCAGATATCTGGTGTCTTACTGTAGTAAAGTATTCAAAAATTTAAATGGCCATATAGCACGATCACATCCCCATATTTATAGAAAAAATATTAC
CGAACGTTTATGCCAATGCTTCTCTCTGTCTGCAAAAAACAGAAATTAATAATAATAGCGGTCAACTTAAATAAAATGAAAAATAAGTTAGAGCCTTGG
GAAAAAACATTCTCTGAAATCTTAAATAGCGAAAAAGATGAAAGTAACTAGACCAGAAGTTAGATGAATTTACCTTATTTCTATGCAATGCCACCT
CTCTGTGCAAGGTCCGGTACATCTGCTACAAAGTATTATAAGCTAGAACTACATGGAGACCAAAATCATGAGAAGTCTAATTTTAAACATCCA
```

B

CLUSTAL format alignment by MAFFT (v7.461)

```
Blag_2      -----
Blag_6      attacggtcacaaagagctgtgctaagcttcaaaaaatgtgaaattcatcgataagaattt

Blag_2      -----gatcagtgaatgagtgactgtgtgtaa
Blag_6      aattcagtgctgtgaaaataccgttgtaattcgatcagtgaagtgagtgactgtgtgtaa
                *****

Blag_2      agatgacgt--cgaatgcgaccccgctgttacttaaacatcattatacttgttgatatct
Blag_6      agatgacgtcggaatgcgaccccgctgttacttaaacatcattatacttgttgatatct
                *****

Blag_2      tcaaaactactacaatttatgttgattttctccgtgaagactgacttctctccttagaca
Blag_6      tcaaaactactacaatttatgttgattttctccgtgaagactgacttctctccttagaca
                *****

Blag_2      ttgttttactcatgatatcagattctggaggacctcgttaccatctaataacggtgaaga
Blag_6      ttgtgttactcatgatatcagattctggaggacctcgttaccatctaataacggtgaaga
                ***

Blag_2      ctattgcttttagtctcttgcaagatatgtggaaaaagtttactagacatggaattaata
Blag_6      ctattgcttttagtctcttgcaagatatgtggaaaaagtttactagacatggaattaata
                *****

Blag_2      tccatattgctagaagccatagacattcccaagttttgatagacattgataagcctactg
Blag_6      tccatattgctagaagccatagacattcccaagttttgatagacattgataagcctactg
                *****

Blag_2      attcaattttatcagagactgtaaacttctcaccttctgacctattgaatgccaggata
Blag_6      attcaattttatcagagactgtaaacttctcaccttctgacctattgaatgccaggata
                *****
```

```

Blag_2      atatccatcttaataactaattcatctacaatgagaaagtcattcgtaacaattccaatg
Blag_6      atatccatcttaataactaattcatctacaatgagaaagtcattcg-----tg
*****
**

Blag_2      catcaagtatacatctaatagatgggttcattaattgggtactccctctgactcttctccag
Blag_6      cagtcataatgatgagaaagataaaagtataacaatattattaaaaatacatcttcag
** . *.** ** . * ****. . * ...**.* .. . * * **.***

Blag_2      ctgtttcgcaagctcaatgtccccattgtggagggttcatttaacggatctaagggtgtca
Blag_6      atatct-----gggtgccttactgtag-----taaagtattcaaaaatttaa
*.*.* ..*****.*.***.* *** * **.***.* * *

Blag_2      atattcatattagtcgatcgcatccccacattcatagatcgacattagttacaaatttaa
Blag_6      atggccatatagcagatcacatccccatatttataga-----aaaaatatta
** . ***** . *****.*****.***.***** * **** * *

Blag_2      ctaaaaatgcgtccagccgctccttgatgagcaagctgatagggtagttctagtaatt
Blag_6      ccgaacgttatgccaatgcttctccttgctgtgcaaaaacagaaattaataataatag--
*..**.* ** * * ..*.*.* ****. . ....**.* **.*.

Blag_2      cagaatccagtcacactgactcaggttttaacatagccctgaatgagtggaacacaaat
Blag_6      -----cggtcaacttaaaataaatgaaaataagttagagccttgggaaaaaacattct
*..*****.*.* ..*.* **.* . . * * .*.***** *

Blag_2      ttg---ttcgcaactgcaactgcaaatactgactctgatttcgataacatgggtccaggattttt
Blag_6      ctgaaattcttaatagcgaaaaagatgaagtgaactagaccagaagttagatgaattta
.* ** *.*.* . . *.*** . *.* **.* * * * * * *

Blag_2      cacacttcttaagtactagcatcaatcttttaccggacctcgacatcccgcaaccaagt
Blag_6      ccttatttctatgcaatgccacctctctgtgcaaaggtccggtacatcctgctacaaagt
* . **..**.*.*.* **.* *** * ** ** *****.* ** *

Blag_2      actatgaagcccgaggaaacgacgtctcgcaacagcagaaaagaactacaataagtcct
Blag_6      attataagctagaactacatggagaccaaatcatgagaagtctaattttaaacaatcca
*..**.***.* * * * *.*.*.* . * ..* **.* **.* * .***

```

Supplementary Figure 4

Comparison of BLAG 2 and BLAG 6 retrotransposon nucleotide sequences.

A – Nucleotide sequences of 5'-end fragments of the BLAG 2 and BLAG 6 retrotransposons. Sequences corresponding to ORFs are highlighted in yellow, and 5'-untranslated regions are highlighted in gray. **B** – Alignment of the corresponding DNA fragments.

The primers used for PCR amplification are underlined.