

B73 GCTTGATTGTAGCTGTTCGAATTTGGTGAGAGATTGGACCCCGTGATGACAGTTTTATGT
HP301 GCTTGATTGTAGCTGTTCGAATTTGGTGAGAGATTGGACCCCGTGATGACAGTTTTATGT
OH7B GCTTGATTGTAGCTGTTCGAATTTGGTGAGAGATTGGACCCCGTGATGACAGTTTTATGT
Tzi8 GCTTGATTGTAGCTGTTCGAATTTGGTGAGAGATTGGACCCCGTGATGACAGTTTTATGT

↑ Donor vi

B73 TGGTTGGAAGTGTGGAACAGTGGCTGACATATAATTTTTTTTGTATTAAGTTGTTACT
HP301 TGGTTGGAAGTGTGGAACAGTGGCTGACATATAATTTTTTTTGTATTAAGTTGTTACC
OH7B TGGTTGGAAGTGTGGAACAGTGGCTGACATATAATTTTTTTTGTATTAAGTTGTTACT
Tzi8 TGGTTGGAAGTGTGGAACAGTGGCTGACATATAATTTTTTTTGTATTAAGTTGTTACT

↑ Acceptor vi

B73 TGTTAGCGCTATGGGGTTGCTATCAATCTTGTATTGACAGCTTGCTTGCAGAAAATCACT
HP301 TGTTAGCGCTATGGGGTTGCTATCAATCTTGTATTGACAGCTTGCTTGCAGAAAATCACT
OH7B TGTTAGCGCTATGGGGTTCCCATCAATCTTGTATTGACAGCTTGCTTGCAGAAAATCGCT
Tzi8 TGTTAGCGCTATGGGGTTCCCATCAATCTTGTATTGACAGCTTGCTTGCAGAAAATCGCT

B73 AGATATTTTTGGCTGATCGGCGCCGTGGAATTCGATTGTGTACTGGGTGCTTGGTTTCT
HP301 AGATATTTTTGGCTGATCGGCGCCGTGGAATTCGATTGTGTACTGGGTGCTTGGTTTCT
OH7B AGATATTTTTGGCTGATCGGCGCCGTGGAATTCGATTGTGTACTGGGTGCTTGGTTTCT
Tzi8 AGATATTTTTGGCTGATCGGCGCCGTGGAATTCGATTGTGTACTGGGTGCTTGGTTTCT

B73 ATATGACTAGGCAGTTTGCTCTTCCATCTATCGCACAGCGCCACATCTTGGCTGGTCTGG
HP301 ATATGACTAGGCAGTTTGCTCTTCCATCTATCGCACAGCGCCACATCTTGGCTGGTCTGG
OH7B ATATGACTAGGCAGTTTGCTCTTCCATCTATCGCACAGCGCCACATCTTGGCTGGTCTGG
Tzi8 ATATGACTAGGCAGTTTGCTCTTCCATCTATCGCACAGCGCCACATCTTGGCTGGTCTGG

B73 CATCAGCAGTTGACGGTCTGAGTGCACCATATGAAAGAGCATCATGTATTCATGAAAGAC
HP301 CATCAGCAGTTGACGGTCTGAGTGCACCATATGAAAGAGCATCATGTATTCATGAAAGAC
OH7B CATCAACAGTTGACGGTCTGAGTGCACCATATGAAAGAGCATCACATATTCATGAAAGAC
Tzi8 CATCAACAGTTGACGGTCTGAGTGCACCATATGAAAGAGCATCACGTATTCATGAAAGAC

B73 ATGTAGTGAAGTGGCTGTGGGCTGCAGGCTGTCAATCCGTTTGGACCATTCTCGAACTCCT
HP301 ATGTAGTGAAGTGGCTGTGGGCTGCAGGCTGTCAATCCGTTTGGACCATTCTCGAACTCCT
OH7B ATGTAGTGAAGTGGCTGTGGGCTGCAGGCTGTCAATCCGTTTGGACCATTCTCGAACTCCT
Tzi8 ATGTAGTGAAGTGGCTGTGGGCTGCAGGCTGTCAATCCGTTTGGACCATTCTCGAACTCCT

B73 CCCAGATCAGTCAAATTCCTTAGGATGTAGCACTGGTAATGTTATCAACAACATTT-TTT
HP301 CCCAGATCAGTCAAATTCCTTAGGATGTAGCACTGGTAATGTTATCAACAACATTT-TTT
OH7B CCCAGATCAGTCAAATTCCTCAGGATGTAGCACTGGTAATGTTATCAACAACATTTTTTT
Tzi8 CCCAGATCAGTCAAATTCCTCAGGATGTAGCACTGGTAATGTTATCAACAACATTTTTTT

↑ Donor vii

B73 TATTTCTATGATATGTACAATGAGTAGGCAGGGAGCGAGGGAGGTCAATGCTCCTATGTC
HP301 TATTTCTATGATATGTACAATGAGTAGGCAGGGAGCGAGGGAGGTCAATGCTCCTATGTC
OH7B TAATTTCTATGATATGTACAATGAGTAGGCAGGGAGCGAGGGAGGTCAATGCTCCTATGTC
Tzi8 TATTTCTATGATATGTACAATGAGTAGGCAGGGAGCGAGGGAGGTCAATGCTCCTATGTC

B73 GAAGTGCAGCTTAAAGTAGAAAACTGTTTCATGCTTCCAATGGTTTGCACAGTGCATAGG
HP301 GAAGTGCAGCTTAAAGTAGAAAACTGTTTCATGCTTCCAATGGTTTGCACAGTGCATAGG
OH7B GAAGTGTAGCTTAAAGTAGAAAACTGTTTCATGCTTCCAATGGTTTGCACAGTGCATAGG
Tzi8 GAAGTGTAGCTTAAAGTAGAAAACTGTTTCATGCTTCCAATGGTTTGCACAGTGCATAGG

B73 TATGCAAACCAACAAAGGAAAACGAGGCCAAACTATGCCCCAATTGTTTCTGTCTGAGTT
HP301 TATGCAAACCAACAAAGGAAAACGAGGCCAAACTATGCCCCAATTGTTTCTGTCTGAGTT
OH7B TATGCAAACCAACAAAGGAAAACGAGGCCAAACTATGCCCCAATTGTTTCTGTCTGAGTT
Tzi8 TATGCAAACCAACAAAGGAAAACGAGGCCAAACTATGCCCCAATTGTTTCTGTCTGAGTT

B73 TGCCAGTTTCAATTTTTGGATCAACATAACTTGGGTATGTTGGAAATAATCCCGTGTCT
HP301 TGCCAGTTTCAATTTTTGGATCAACATAACTTGGGTATGTTGGAAATAATCCCGTGTCT
OH7B TGCCAGTTTCAATTTTTGGATCAACATAACTTGGGTATGTTGGAAATAATCCCATGTCT
Tzi8 TGCCAGTTTCAATTTTTGGATCAACATAACTTGGGTATGTTGGAAATAATCCCATGTCT

B73 AGGTTCATAGCATTACTTTAGCTAAATTTTCAGCATGGAATAATAGGAAGTAATATGCTG
HP301 AGGTTCATAGCATTACTTTAGCTAAATTTTCAGCATGGAATAATAGGAAGTAATATGCTG
OH7B AGGTTCATAGCATTACTTTAGCTAAATTTTCAGCATGGAATAATAGGAAGTAATATGCTA
Tzi8 AGGTTCATAGCATTACTTTAGCTAAATTTTCAGCATGGAATAATAGGAAGTAATATGCTA

B73 ATTAGTTGAGTAATATCCTGCATTTATTAGGGGCTATCATTGCTTTATTTGTAGCTCACA
HP301 ATTAGTTGAGTAATATCCTGCATTTATTAGGGGCTATCATTGCTTTATTTGTAGCTCACA
OH7B ATTAGTTGAGTAATATCCTGCATTTATTAGGGGCTATCATTGCTTTATTTGTAGCTCACA
Tzi8 ATTAGTTGAGTAATATCCTGCATTTATTAGGGGCTATCATTGCTTTATTTGTAGCTCACA

B73 TTGGTTATAATAGTAGTAGTAGTAGAAGAGAAAATAGAAAAGGCAAGCCATTCCAGCCACCAA
HP301 TTGGTTATAATAGTAGTAGTAGTAGAAGAGAAAATAGAAAAGGCAAGCCATTCCAGCCACCAA
OH7B TTGGTTATAATAGTAGTAGTAGTAGAAGAGAAAATAGAAAAGGCAAGCCATTCCAGCCACCA
Tzi8 TTGGTTATAATAGTAGTAGTAGTAGAAGAGAAAATAGAAAAGGCAAGCCATTCCAGCCACCA

B73 AAACACTTGTACTATGTTTCTGTGACCTTTTGGAGGCTTTCAACCTGTCAGGAATCAGGA
HP301 AAACACTTGTACTATGTTTCTGTGACCTTTTGGAGGCTTTCAACCTGTCAGGAATCAGGA
OH7B AAACACTTGTACTGTTTCTGTGACCTTTTGGAGGCTTTCAACCTGTCAGGAATCAGGA
Tzi8 AAACACTTGTACTGTTTCTGTGACCTTTTGGAGGCTTTCAACCTGTCAGGAATCAGGA

B73 TATTTGATGCATCCAATTATCTAAATCCAACAAATCTTGGTATTATGCTTACTGTATAAT
HP301 TATTTGATGCATCCAATTATCTAAATCCAACAAATCTTGGTATTATGCTTACTGTATAAT
OH7B TATTTGATGCATCCAATTATCTAAATCCAACAAATCTTGGTATTATGCTTACTGTATAAT
Tzi8 TATTTGATGCATCCAATTATCTAAATCCAACAAATCTTGGTATTATGCTTATTGTATAAT

B73 CATGGTCGTATTATTTTTAGTCTGTTGATATTTCACTGGCATAAATGTTTCTTCTGTG
HP301 CATGGTCGTATTATTTTTAGTCTGTTGATATTTCACTGGCATAAATGTTTCTTCTGTG
OH7B CATGGTCGATTATTTTTAGTCTGTTGATATTTCACTGGCATAAATGTTTCTTCTGTG
Tzi8 CATGGTCGATTATTTTTAGTCTGTTGATATTTCACTGGCATAAATGTTTCTTCTGTG

↓ Acceptor i, iii, iv⁵, vii

B73 CTTTCATATCCACTATGTAACCCATGTTTTATTGTTTGTAGAGAACTACAA^{TTTATGCTC}
HP301 CTTTCATATCCACTATGTAACCCATGTTTTATTGTTTGTAGAGAACTACAA^{TTTATGCTC}
OH7B CTTTCATATCCACTATGTAACCCATGTTTTATTGTTTGTAGAGAACTACAA^{TTTATGCTC}
Tzi8 CTTTCATATCCACTATGTAACCCATGTTTTATTGTTTGTAGAGAACTACAA^{TTTATGCTC}

↑ Acceptor ii

B73 AAGTCAATGCTGCTCTTCGAAAATAAGAGACACATCAGAGGTCTACATGCAATTCAGC
HP301 AAGTCAATGCTGCTCTTCGAAAATAAGAGACACATCAGAGGTCTACATGCAATTCAGC
OH7B AAGTCAATGCTGCTCTTCGAAAATAAGAGACACATCAGAGGTCTACATGCAATTCAGC
Tzi8 AAGTCAATGCTGCTCTTCGAAAATAAGAGACACATCAGAGGTCTACATGCAATTCAGC

B73 CTACTTTTATTCACTTATTTCCCTCAAATGCACAGAAAGTATAACTACTATCTCTGGTCTG
HP301 CTACTTTTATTCACTTATTTCCCTCAAATGCACAGAAAG-TTAACTACTATCTCTGGTCTG
OH7B CTACTTTTATTCACTTATTTCCCTCAAATGCACAGAAAGTATAACTACTATCTCTGGTCTG
Tzi8 CTACTTTTATTCACTTATTTCCCTCAAATGCACAGAAAGTATAACTACTATCTCTGGTCTG

B73 GTGCAGTTTGTCCAATCTTTTGCATCAGAGCATCTTAAGACGCCATTAGAAGAACTTGTG
HP301 GTGCAGTTTGTCCAATCTTTTGCATCAGAGCATCTTAAGACGCCATTAGAAGAACTTGTG
OH7B GTGCAGTTTGTCCAATCTTTTGCATCAGAGCATCTTAAGATGCCATTAGAAGAACTTGTG
Tzi8 GTGCAGTTTGTCCAATCTTTTGCATCAGAGCATCTTAAGATGCCATTAGAAGAACTTGTG

B73 AAAGTAATAAAAAACAAGTCCACCA---CTGAGTTATGGGTAGAGAAAATTCTATAAGAAG
HP301 AAAGTAATAAAAAACAAGTCCACCA---CTGAGTTATGGGTAGAGAAAATTCTATAAGAAG
OH7B AAAGTAATAAAAAACAAGTC-CACCACTGAGTT--ATGGGTAGAGAAAATTCTATAAGAAG
Tzi8 AAAGTAATAAAAAACAAGTCCACCGCTGAGTTATTGGGTAGAGAAAATTCTATAAGAAG

B73 GTAACCAATCTACCGGAGCCTTTTCCCATGATCTTGTTGAGAAGTTAGAAGAATACCTG
HP301 GTAACCAATCTACCGGAGCCTTTTCCCATGATCTTGTTGAGAAGTTAGAAGAATACCTG
OH7B GTAACCAATCTACCGGAGCCTTTTCCCATGATCTTGTTGAGAAGTTAGAAGAATACCTG
Tzi8 GTAACCAATCTACCGGAGCCTTTTCCCATGATCTTGTTGAGAAGTTAGAAGAATACCTG

B73 GATGTAAGTATTATATACCATACATTGCATAAGTGTACTTTCATGATGAAATAATGCATA
HP301 GATGTAAGTATTATATACCATACATTGCATAAGTGTACTTTCATGATGAAATAATGCATA
OH7B GATGTAAGTATTATATACCATACATTGCATAAGTGTACTTTCATGATGAAATAATGCATA
Tzi8 GATGTAAGTATTATATACCATACATTGCATAAGTGTACTTTCATGATGAAATAATGCATA

B73 TATATGTTCTAATTTTCCTTCATCTATGGTGCCCTTGTAGAACTTGAAGGGCAACCCG
HP301 TATATGTTCTAATTTTCCTTCATCTATGGTGCCCTTGTAGAACTTGAAGGGCAACCCG
OH7B TATATGTTCTAATTTTCCTTCATCTATGGTGCCCTTGTAGAACTTGAAGGGCAACCCG
Tzi8 TATATGTTCTAATTTTCCTTCATCTATGGTGCCCTTGTAGAACTTGAAGGGCAACCCG

B73 TGGACTTGTCTTCCTTATTGTATGACCACCAGCTGATCGATGCATATCAAACAGTACCG
HP301 TGGACTTGTCTTCCTTATTGTATGACCACCAGCTGATCGATGCATATCAAACAGTACCG
OH7B TGGACTTGTCTTCCTTATTGTATGACCACCAGCTGATCGATGCATATCAAAGCAGTACCG
Tzi8 TGGACTTGTCTTCCTTATTGTATGACCACCAGCTGATCGATGCATATCAAAGCAGTACCG

B73 ACATCCTGCAAAGCACTATTTTTACACAACAGTATGTTTATATAGAGATGTTATATTTGC
HP301 ACATCCTGCAAAGCACTATTTTTACACAACAGTATGTTTATATAGAGATGTTATATTTGC
OH7B ACATCCTGCAAAGCACTATTTTTACACAACAGTATGTTTATACAGGGATGCTATATTTGC
Tzi8 ACATCCTGCAAAGCACTATTTTTACACAACAGTATGTTTATACAGGGATGCTATATTTGC

B73 ATCTGGCTACTCTTGTGCTATCTTTTTGAAACTCATTATTTTCATTTTGTTCATTCGAA
HP301 ATCTGGCTACTCTTGTGCTATCTTTTTGAAACTCATTATTTTCATTTTGTTCATTCGAA
OH7B ATCTGGCTACTCTTGTGCTATCTTTTTGAAACTCATTATTTTCATTTTGTTCATTCGAA
Tzi8 ATCTGGCTACTCTTGTGCTATCTTTTTGAAACTCATTATTTTCATTTTGTTCATTCGAA

B73 ACATTTTTACCCCTTCCCCCTTCTCTTGACAGGTATGTGGAACGTGTTCTAGCTAACGA
HP301 ACATTTTTACCCCTTCCCCCTTCTCTTGACAGGTATGTGGAACGTGTTCTAGCTAACGA
OH7B ACATTTTTACCCCTTCCCCCTTCTCTTGACAGGTATGTGGAACGTGTTCTAGCTAACGA
Tzi8 ACATTTTTACCCCTTCCCCCTTCTCTTGACAGGTATGTGGAACGTGTTCTAGCTAACGA

B73 AAGGTTGTAGAAAAGGGCCCTAAAAAGGGCACGATGAAAGCCCAACTTGCTAAGAGAGGT
HP301 AAGGTTGTAGAAAAGGGCCCTAAAAAGGGCACGATGAAAGCCCAACTTGCTAAGAGAGGT
OH7B AAGGTTGTAGAAAAGAGCACGAT-----GAAAAGCCCAACTTGCTAAGAGAGGT
Tzi8 AAGGTTGTAGAAAAGAGCACGAT-----GAAAAGCCCAACTTGCTAAGAGAGGT

B73 AGGAAGGCTAAGAATTGATGACATGTTGATTTCCCTCGTCAGAGAAAAAATGCTATAGCA
HP301 AGGAAGGCTAAGAATTGATGACATGTTGATTTCCCTCGTCAGAGAAAAAATGCTATAGCA
OH7B AGGAAGGCTAAGAATTGATGACATGTTGATTTCCCTCGTCAGAGAAAAAATGCTATAGCA
Tzi8 AGGAAGGCTAAGAATTGATGACATGTTGATTTCCCTCGTTAGAGAAAAAATGCTATAGCA

Figure S2 Alignment of *Helitron Hel1-332* between the maize inbred lines. The alignment shows the splice junctions of alternative splicing events (i – viii) of *Hel1-332* shown in figure 3. The blue and gray shaded sequences flanking the splice sites represent exons and introns, respectively. Asterisks represent the conserved sequences beneath the highlighted regions, while the dashed lines fill the gaps in the alignment. The inbred lines are indicated on the left. The intron retention at splice sites iv and viii are marked by §.