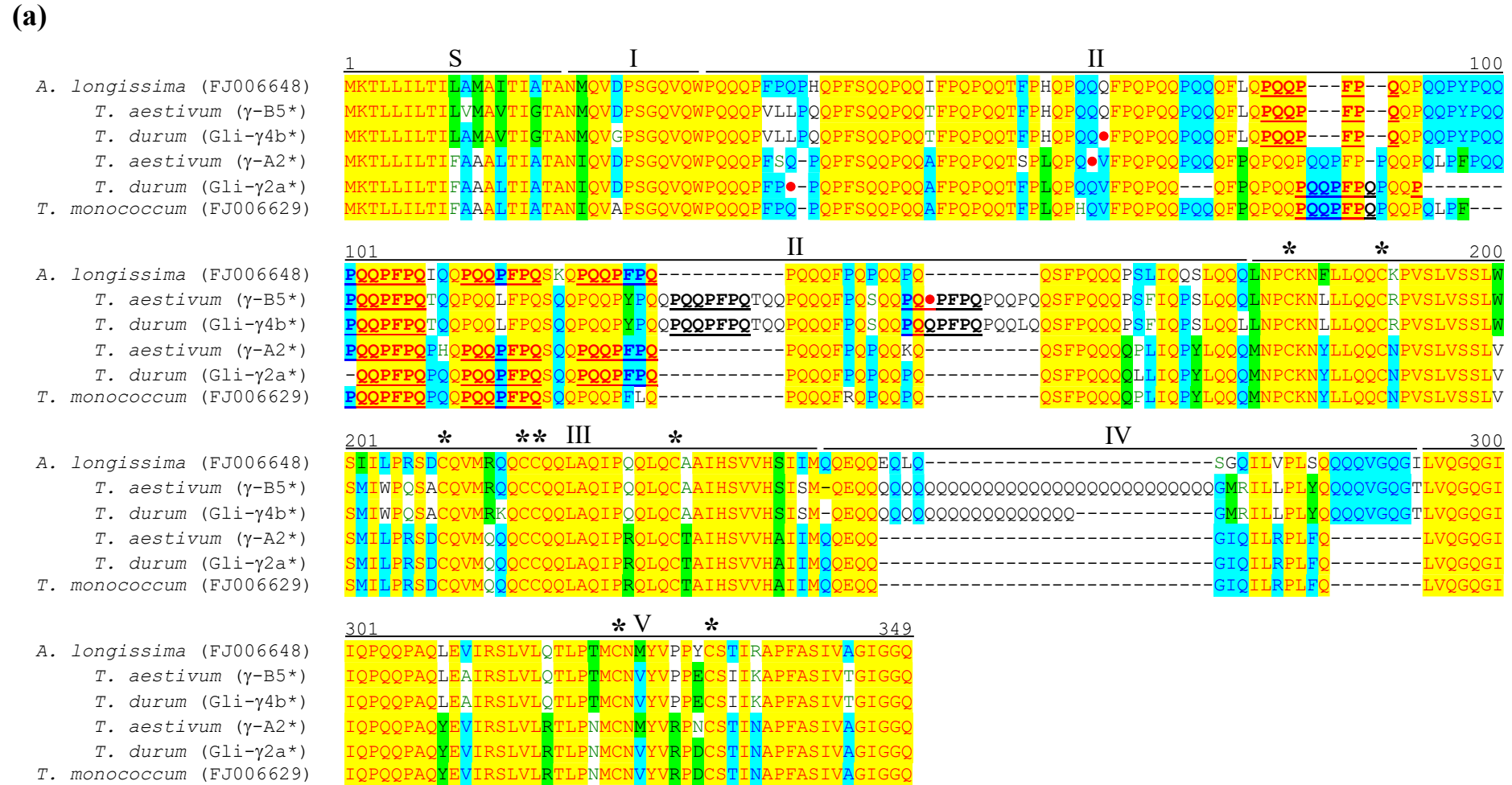


Figure S3. Alignment of the amino acid sequences deduced from the pseudogenes encoding γ -gliadins **(a)** and δ -gliadins **(b)**. Roman numerals indicate conserved domains as assigned by Anderson and coworkers [31]. The eight conserved cysteine residues are indicated with an asterisk, the first premature stop codon is indicated with a red circle. The heptapeptide motif PQQFPQ is highlighted in bold and underlined. The alignments were performed using Vector NTI Suite software (version 9.0; Thermo Fisher Scientific, Waltham, MA, USA).



(b)

	1	S	I	II	100
<i>γ</i> -3-hordein (JQ867080)	MKIFILFSLLGVATITTTTMOFNPSGLELERPQQLFPQWQPLPQQPPFLQQEPEQFPYPQQ				Q-PLPQQQPFPPQQPQLPHQHQQFP
<i>T. aestivum</i> (δ-A2*)	MKIFILVFALLVATTISITATAQLDPSVHDLERPHQSEFPQQQPLPPLQPFPPQEP●QEFPLQ				Q-PLPQQQPFPPQQPQLPHQHQQFP
<i>T. durum</i> (Gli-δ2a*)	MKIFILVFALLVATTISTTGTATAQLDPSVHDLERPHQSEFPQQQPLPPLQPFPPQEP●QEFPLQ				Q-PLPQQQPFPPQQPQLPHQHQQFP
<i>T. aestivum</i> (δ-B1)	MKILLVFALLVSVSTTITTAIVQLDPSVHVQERPPQSEFLQQQPLTQQQPLPLQEPQQQELFPQKEPQQPFSLQQPQPQEQQFPYPQQ				Q-PLPQQQPFPPQQPQLPHQHQQFP
<i>T. durum</i> (Gli-δ1b*)	MKIFILVFALLVSVSTTITTAIVQLDPSVHVQERPPQSEFPQQQPLTQQQPFPLQEPQQQELFPQKEPQQPFLSLQQPQPQEQQFPYPQQ				Q-PLPQQQPFPPQQPQLPHQHQQFP
<i>T. durum</i> (Gli-δ1a*)	MKIFILVFALLVSVSTIITTTATVQLDPSIHVQERPPQSEFPQQQPLNQQQPFPLQEPQQQELFPQQ				Q-PLPQQQPFPPQQPQLPHQHQQFP
<i>T. aestivum</i> (δ-A1*)	MKIFILVFALLVSVSTIITTTATAQLDPSIHVQERPPQSEFPQQQPLTQQQPFPLQEPQQQELFPQQ				Q-PLPQQQPFPPQQPQLPHQHQQFP
<i>T. monococcum</i> (JX081266)	MKIFILVFALLVSVSTIITTTATTQLDPSIHVQERPPQSEFPQQQPLTQQQPFPPQEPQQQELFPQQ				Q-PLPQQQPFPPQQPQLPHQHQQFP

	101	II	*	*	200
<i>γ</i> -3-hordein (JQ867080)	QQLPQQQFPQQMPLQ-----F-----QQQPQFPQCKFFGQYQQPLTQQPYPQQQPIAQQQPSLEEQHQLNLCKEFLLQQCTLEKVPPLLSVLSFIRPHI				
<i>T. aestivum</i> (δ-A2*)	QQPQQQFP-----QQQTFPQP--HQQPQFPKQFPFYQYQQPFTQQP-PKEQPIAQQQPCVEERQRLNLCKEFLLQQCNPEEKVSSLHSMIPFL-PKT				
<i>T. durum</i> (Gli-δ2a*)	QQPQQQFP-----QQQTFPQP--HQQPQFPKQFPFYQYQQPFTQQP-PKEQPIAQQQPCVEERQRLNLCKEFLLSQCNPEEKVSSLHSMIPFL-PKT				
<i>T. aestivum</i> (δ-B1)	QQPQQQFPQQMPLPYEQQTFPQ-QQQQFPQFPQQQFPFYQYQQPLTQQPYPQEQPLPQQQPSVEEKQQLNLCKEFLLQQCNPEEKLSLISVIFFLRPKT				
<i>T. durum</i> (Gli-δ1b*)	QQPQQQFPQQMPLPYEQQTFPL-QQQRQFPQFPQFPFYQYQQPLTQQPYPQEQPLPQQQPSMEEKQQLNLCKEFLLQQCNPEEKLSLLQSVIFFLRPKT				
<i>T. durum</i> (Gli-δ1a*)	●QPPQQQFPQQMPLPYQQQIFP-----QQQP--PQQQFPFYQYQQPLTQQPYPQEQPLPQQQPSVEENQQLNLCKEFLLQQCNPEEKLSLLQSVIFFLRPKT				
<i>T. aestivum</i> (δ-A1*)	QQPQQQFP●-MPLPHQQQIFPQ-----QQQP--PQQQFPFYQYQQPLTQQPYTREQLPQQQPSVEENQQLNLCKEFLLQQCNPEEKVSSLQSMIPFLRPKT				
<i>T. monococcum</i> (JX081266)	QQLPQQQFPQQMPLPHQQQIFP-----QQQP--PQQQFPFYQYQQPLTQQPYPQEQPLPQQQPSVEENQQLNLCKEFLLQQCNPEEKLSLLQSVIFFLRPKT				

	201	*	**	III	*	IV	300
<i>γ</i> -3-hordein (JQ867080)	SQQNSCQLKRQCCQQLANINEQSRCPAIIQTIVHAIIMQQQ--QVQVQVDHGFVQSLLQQLGQGMPILQQQPGQAFVLPQQQAQFKVVGSLVVIQTLP						
<i>T. aestivum</i> (δ-A2*)	SQQNSCQLKRQECQQLAHIREQS-CLAIQSPVHAIIVQQQRRQ--QVDRGFQGPQPPQLGQGMPMQPQ-PLGQGFILPQQLAQFKLVRSIAIQILP						
<i>T. durum</i> (Gli-δ2a*)	SQQNSCQLKRQECQQLAHIREQS-CPAIQSPVHAIIVQQQRRQ--QVDRGFQGPQPPQLGQGMPMQPQ-PLGQGFILPQQLAQFKLVRSIAIQILP						
<i>T. aestivum</i> (δ-B1)	SQQNSCQLKRRLCCQQLARINEPSRCPAIHNIVHAIIMQQQ-----HVDRGFQGPQPPQLGQGMPMQPQYQLGQGFIPLPQQLAQFKLVRLVVIQTLP						
<i>T. durum</i> (Gli-δ1b*)	SQQNSCQLKRRLCCQQLAHINEPSRCPAIHNIVHAIIMVQQ-----HVDRGFQGPQPPQLGQGMPMQPQYQLGQGFIPLPQQLAQFKLVRLVVIQTLP						
<i>T. durum</i> (Gli-δ1a*)	SQQNNCQLKRQCCQQLAHISEPSRCPAIHNIVHAIIMQQQ--QQQDQVDRGFVQPPQPPQLGQGMPMQPQHQLGQGLSLPQQLAQFKLVRLVVIQTLP						
<i>T. aestivum</i> (δ-A1*)	SQQNNCQLKRQCCQQLAHISEPSRCPAIHNIVHAIIMQQQ-----QHVDRGFVQPPQPPQLGQGMPMQPQHQLGQGLSLPQQLAQFKLVRLVVIQTLP						
<i>T. monococcum</i> (JX081266)	SQQNNCQLKRQCCQQLAHISEPSRCPAIHNIVHAIIMQQQ--QQQH--HVDRGFVQPPQPPQLGQGMPMQPQHQLGQGLSLPQQLAQFKLVRLVVIQTLP						

	30*	*	V	328
<i>γ</i> -3-hordein (JQ867080)	MLCNVHVPYCS----PFGSMATGSGGQ			
<i>T. aestivum</i> (δ-A2*)	MLCNVHVPSDCYTITAYFGSMTACSCGQ			
<i>T. durum</i> (Gli-δ2a*)	MLCNVHVPSDCYTITAYFGSMTACSCGQ			
<i>T. aestivum</i> (δ-B1)	MLCNVHVPSDCYTTSAPFGSMTAMNGGQ			
<i>T. durum</i> (Gli-δ1b*)	MLCNVHVPSDCYTTSAPSGSMTALNGGQ			
<i>T. durum</i> (Gli-δ1a*)	MLCNVHVPSDCYTISAPFGGITAYNSGQ			
<i>T. aestivum</i> (δ-A1*)	MLCNVHVPSDCYTISAPFGGITAYNGGQ			
<i>T. monococcum</i> (JX081266)	MLCNVHVPSDCYTISAPFGGITAYNGGQ			