

		1	2	3	4						
Zp22/6		TGTGTAAGGTGAAGAGATCTTGCATGTCATTC									
azs22.11		TGTGTAAGGTGAAGAGATGATGCATGTCAT-C									
azs22.12		TGTGTAAGGTGAAGAGATGATGCATGTCAT-C									
azs22.13		TGTGCAAGGTGAAGAGATCATGCATGTCATTC									
azs22.4		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
azs22.1		TGTGTAAGGTGAAGCGATCATGCATGTCATTC									
azs22.3		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
azs22.5		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
azs22.19		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
azs22.7		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
azs22.8		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
azs22.2		TGTGTAAGGTGAAGCGATCATGCATGTCATTC									
azs22.20		TGTGTAAGGTGAAGAGATCATGCATTTTCATTC									
azs22.6		TGTTTAAAGGTGAAGAGATCATGCATGTCATTC									
azs22.9		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
azs22.16		TGTGTAAGGTGAAGAGATCATGCATGTCATTC									
		5	6	7	8	9	10				
Zp22/6		CACGTAGAT-AAAAAGAATGCATATATAAAAAATGGCACATTTTCTTGTAGGTAGTGGAAA									
azs22.11		CAAGTATATGAAAAT-AATTCCTATA-GAAAATGACACTTTTTCTTATAGGTAGTGGAAA									
azs22.12		CAAGTATATGAAAAG-AATTCCTATA-GAAAATGACAATTTTTCTTGTAGGTAATGGAAA									
azs22.13		CTCATGTATGAAAAG-AATTCCTATA-GAAAATGACGAATTTTCTTGTAGGTAGTGGAAA									
azs22.4		CACGTAGATGAAAAG--AATTCCTATATAAAAAATGACACCTTTTCTTGTAGGTAGTGGAAA									
azs22.1		CACGTAGATGAAAAAATTCCTATATAAAAAATGACAATTTTTCTTGTAGGTAGTGGAAA									
azs22.3		CACGTAGATGAAAAG-AATTCCTATATAAAAA-TGACACCTTTTCTTGTAGGTAGTGGAAA									
azs22.5		CACGTAGATGAAAAG-AATTCCTATATAAAAA-TGACACCTTTTCTTGTAGGTAGTGGAAA									
azs22.19		CACGTAGATGAAAAG-AATTCCTATATAAAAA-TGACACCTTTTCTTGTAGGTAGTGGAAA									
azs22.7		CACGTAGATGAAAAG-AATTCCTATATAAAAA-TGACACCTTTTCTTGTAGGTAGTGGAAA									
azs22.8		CACGTAGATGAAAAG-AATTCCTATATAAAAA-TGACACCTTTTCTTGTAGGTAGTGGAAA									
azs22.2		CACATAGATTAATAAA-AAATCCTATATAAAAAATGACAATTTTTCTTGTAGGTAGTGGAAA									
azs22.20		CACGTAGATAAAAAG-AGTTCCTATATAAGAATGGCACATTTTCTTGTAGGTAGTGGAAA									
azs22.6		CACGTAGATGAAAAG-AATTCCTATATAAAAA-TGACACATTTTCTTGTAGGTAGTGGAAA									
azs22.9		CACGTAGATAAAAAG-AATGCCTATATAAAAAATGGCACATTTTCTTGTAGGTAGTGGAAA									
azs22.16		CACATAAATGAAAAG-AATTCCTATATAAAAAATGACATGTTTTGTTGTAGGTAGTGGAAA									
		11	12	13	14	15	16	17	18	19	20
Zp22/6		GTATCTTTCCAGCTAAGACC----ATATAATCCGATAAAGGTGATAACTAAATGTCGAAA									
azs22.11		CTATCTTTCTA-----TATAATCCGATGAAACCGATAACTAAATGTCGAAA									
azs22.12		CTAGCTTTCCAGCAAAGACCA----TATAATCTGATGAAACTGATAACCAAATGTCGAAA									
azs22.13		CTATCTTTATAGCAAAGTCCA----TATAATCATATGAAACTGATGACTAAATGTCAAAA									
azs22.4		GTACCTTTCCAGCAAAGATCATATATATAATCCGATAAAGCTGAAAACAAATGTCGAAA									
azs22.1		CTATCTTTCTAGCAAAGACCATATATATAATCCGATAAAGCCGATAACTAAATGTCGAAA									
azs22.3		GTATCTTTCCAGCAAAGACCATATA----ATCCGATAAAGTTGATAACTAAATGTCAAAA									
azs22.5		GTATCTTTCCAGCAAAGACCATATA----ATCCAATAAAGTTGATAACTAAATGTCGAAA									
azs22.19		GTATCTTTCCAGCAAAGACCATATA----ATCCGATAAAGTTGATAACTAAATGTCAAAA									
azs22.7		GTATCTTTCCAGCAAAGACCATATA----ATCCGATAAAGTTGATAACTAAATGTCGAAA									
azs22.8		GTATCTTTCCAGCAAATACCATATA----ATCCGATAAAGCCGATAACTAAATGTCGAAA									
azs22.2		GTATCTTTCCAGCAAAGACTATATATAATCCGATAAAGCCGATAACTAAATGTCAAAA									
azs22.20		GTATCTTTCCAGCAAATACCATATA----ATCCGATAAAGATGATAACTAAATGTCGAAA									
azs22.6		GTATCTTTCCAGCAAAGACTATA----ATCCGATAAAGTTGATAACTAAATGTCGAAA									
azs22.9		GTATCTTTCCAGCAAAGACCATATA----ATCCGATAAAGCTGATAACTAAATGTCGAAA									
azs22.16		TTATCTTTCCAGCAAAGACCATATA----ATCCGATAAAGCTGATAACTAAATGTCAAAA									
		21	22	23	24	25	26	27	28	29	
Zp22/6		TCGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTGG--AAAAAAGACAAAAT									
azs22.11		TTGAGTAGGTGCCATATCATCGATAGCTTATCTATTGTTTGGC--AAAA--GACAAAAT									
azs22.12		TTGAGTAGGTGCCATATCATCTGATAGCTTATCTATTGTTTGGC--AAAA--GATAAAAAT									
azs22.13		TTGAGTAGGTGCCATATCATCTATAGCTTATCCATTGTTGGGA--AAAA--TACAAAAT									
azs22.4		TCGAGTAGATGCCATATCATCTATACCTTATCTCTTGTGTTGGA--AAAA--GACAAAAC									
azs22.1		TCGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTGG--AAAA--GACAAAAT									
azs22.3		TAGAGTAGATGCCATATCATATATACCTTATCTGTTGTTGGA--AAAAAAGACTAAAT									
azs22.5		TAGAGTAGATGCCATATCATTTATACCTTATCTGTTGTTGGA--AAAAA-GACTAAAT									

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azs22.19 TAGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTTGGGA--AAAA---GACTAAAT
azs22.7 TAGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTTGGGA--AAAA---GACTAAAT
azs22.8 TCGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTTGGGA--AAAA---GACAAAAAT
azs22.2 TCGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTTGGGA--AAAA---GACAAAAAT
azs22.20 TCGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTTGGGA--AAAA---GACAAAAAT
azs22.6 AAGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTTGGGA--AAAA---GACTAACT
azs22.9 TCGAGTAGATGCCATATCATCTATACCTTATCTGTTGTTTGGAAAAAAGACAAAAAT
azs22.16 TCGAGTAAGTGCCATATCATCTATACCTTATCTGTTGTTTGGGA--AAAA---GACAAAAAT

3031 32333435 36373839 40
Zp22/6 CCAAAAAA-TTTATAT----GAGATCTCACCTATATAAAATAGCGCCCAAATCAGTAGTTA
azs22.11 CCAATATATATATATAT----GAGATCTCACATGTATGAATATCTCCCAAATCAGTAGTTA
azs22.12 CCAATATATATATATATATGAGATCTCACCTATATAAAATATCTCCCAAATCAGTAGTTA
azs22.13 CCAAAAA-ATATATAT----GAGACCTCACCTGTATATAAACCACCAAATCAGTAGTTA
azs22.4 CAAAAA--TATTTAT----GAGGTCCTCACTTGTATAAAATAGCTCCCAAATCAGTAGTTA
azs22.1 CCAAAAA-ATATATAT----GAGATCTCACTTGTATGAATAGCTCCCAAATCAGTAATTA
azs22.3 CCCAAAA-ATATATAT----GAGATCTCACTTGTATAAAATAGCTCCCAAATTAGTAGTTA
azs22.5 CC--AAA-ATATATAT----GACATCTCACTTGTATAAAATAGCTCCCAAATCAGCAGTTA
azs22.19 CCAAAAA-ATATATAT----GAGATCTCACTTGTATAAAATAGCTCCCAAATCAGTAGTTA
azs22.7 CCAAAAAATATATATAT----AAGATCTCACTTGTATAAAATAGCTCCCAAATTAGTAGTTA
azs22.8 CCAAAAA-ATATATTT----GAGACCTCACCTGTATAAAATAGCTCCCAAATCAGTAGTTA
azs22.2 CCAAAAAAATATATAT----GAGATCTCACTTGTATAAAATAGCTCCCAAATCAGTAGTTA
azs22.20 CCAACAA-AAATATTC----GAGACCTCACCTATATAAAATAGCTCCCATATCAGTAGTTA
azs22.6 ACAAAAA-ATATATAT----GAGATCTCACTTGTATAAAATAGCTCCCAAATCAGTAGTTA
azs22.9 CCAAAAAAATATATAA----GAGATCTCACCTATATAAAATAGCTCTGAAATCAGTAGTTA
azs22.16 CCAAAAAAATATAT----GAGATCTCACATGTATAAAATAGCTCCCAAATCAGTAGTTA

4142
Zp22/6 ATCCA
azs22.11 ATTCA
azs22.12 ATCCA
azs22.13 ATTCA
azs22.4 ATCCA
azs22.1 ATCCG
azs22.3 A-CCA
azs22.5 A-CCA
azs22.19 A-CCA
azs22.7 A-CCA
azs22.8 ATCCA
azs22.2 ATCCA
azs22.20 ATCCA
azs22.6 A-CCA
azs22.9 ATCCA
azs22.16 ATACA

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Figure S4 The alignment of the 22-kDa α -zein promoters from B73 and the copy Zp22/6 from BSS53. The cytosine positions indicated in Figs. 4b, 7c and 9 are marked in the corresponding places; P-box and “ACGT” core motif are shaded.