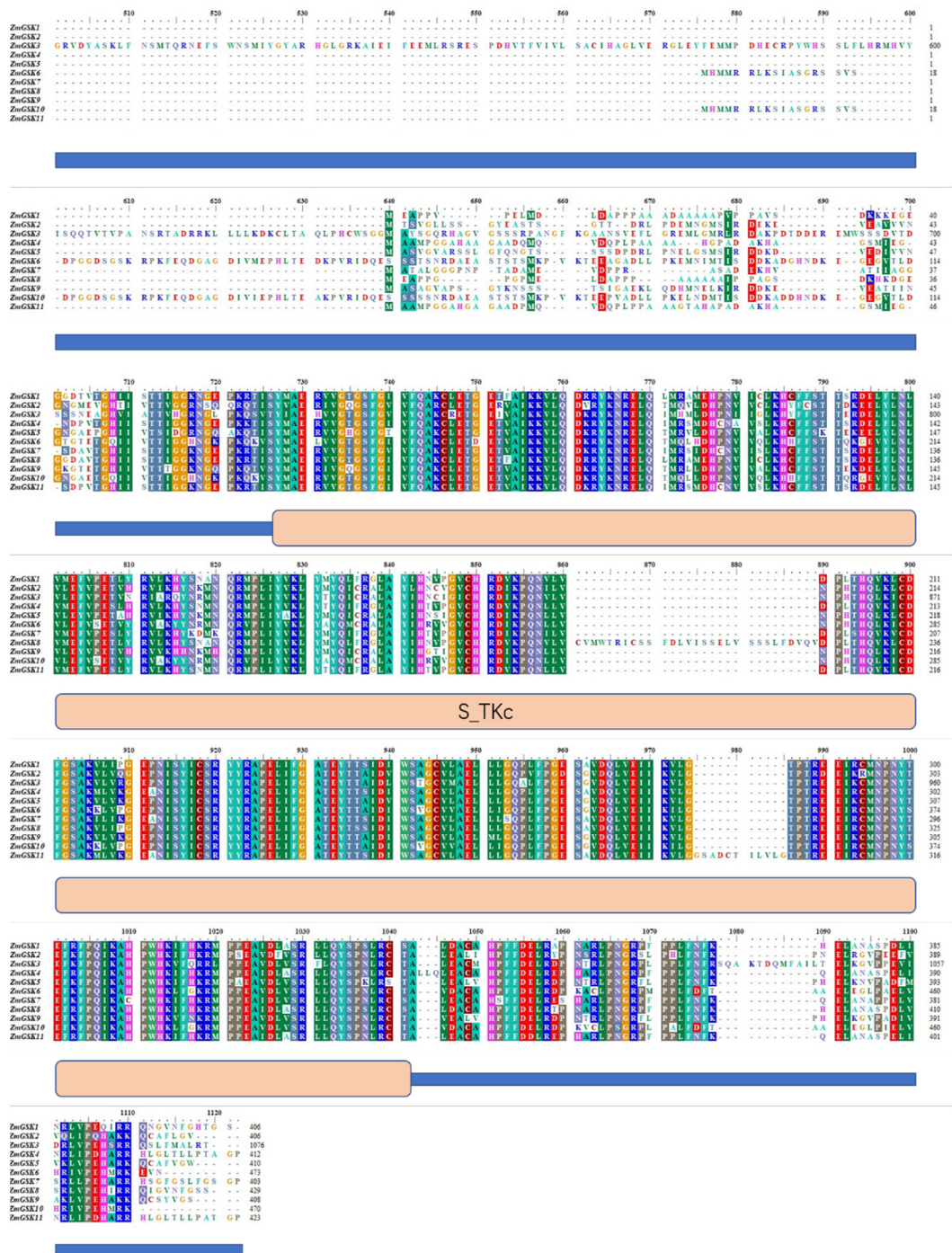**Supplementary**

Figure S1 Sequence alignment analysis of maize GSK genes.
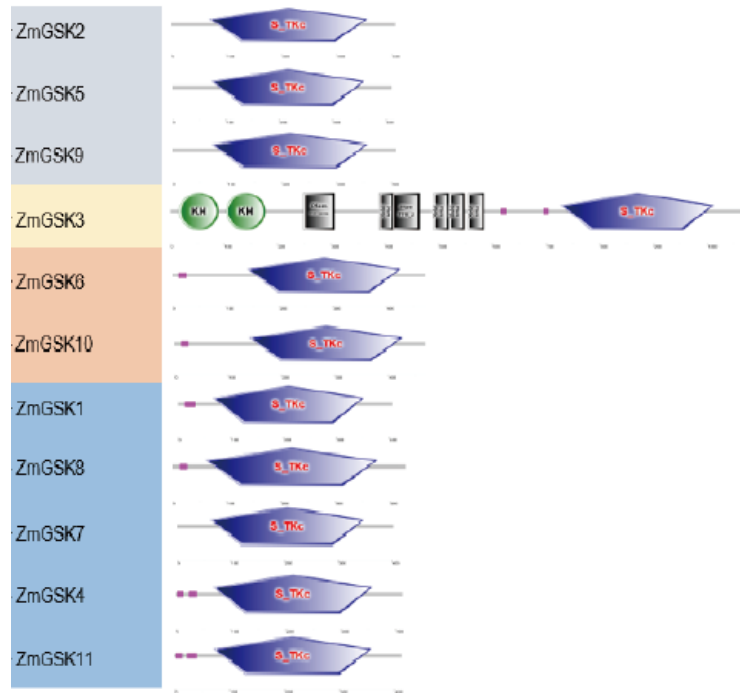
Figure S2 Conserved motif analysis of maize GSK genes.

Table S1. Conserved motifs in different maize GSK genes

Motif Sequence	
motif_1	TPTREEIRCMNPNYTEFKFPQIKAHPWHKIFHKRMPPEAVDLVSRLLQYS
motif_2	THQLKICDFGSAKVLVKGEPNISYICSRYYYRAPELIFGATEYTTAIDIWS
motif_3	QTISYMAERVVGTGSFGIVFQAKCLETGETVAIKKVLQDKRYKNRELQTM
motif_4	KHYNNMNQRMPLIYVKLYMYQICRALAYIHNVPGVCHRDIKPQNLLVBPH
motif_5	RLLDHPNVVSLKHCFFSTTSRDELYLNLVLEFVPETVYRVL
motif_6	ALEACAHPFFDELRDPNARLPNGRPLPPLFNFK
motif_7	GCVLAELLLGQPLFPGESGVDQLVEIIKV
motif_8	VEGVVIEGNGAETGHIISTTIGGKNGZPK
motif_9	HELANAPPELVNRLVPEHARR
motif_10	PNLRCT
motif_11	MHMMRRLKSIASGRSSVSDPGGDSGSKRPKFEQDGAGDIVIEPHLTEDKP
motif_12	SYKPVKSTSAGADRLPDEMNEMSIRDDKE
motif_13	AEAPPAPDPMZLDQPLPAAAA
motif_14	VRIDQESSSSSNRDAEASTST
motif_15	MAAMPG

Table S2. Primers of GSK semi-quantitiative RT-PCR and qRT-PCR

Primer Sequence	
GSK1QF:	TCAACAACGAGCAGGGACG
GSK1QR:	GGTTCACCAGGAATCAGGACTT
GSK2QF:	ATGTGGCAGAGCGTATCGTG

GSK2QR: CGCAGTTGTGAAGGTAAGCC
GSK3QF: CTACAATGGCAATCTACAGGAGG
GSK3QR: TGGTCTGGACTCTCTCTGCTG
GSK4QF: GGTGTTTGCCACAGGGATG
GSK4QR: TCCACAGCACTTTCGCCA
GSK5QF: TTGAAACTGGTGAGACCGTAGC
GSK5QR: TGCCAAGGCTCTACAAATCTG
GSK6QF: CCTGTGCGGATAGACCAAGA
GSK6QR: TGTTCCAGTCCCATCAAGTGTA
GSK7QF: TTCCCGTCTTCTTCAGTATTCG
GSK7QR: CCGAATCCTGAATGCCGT
GSK8QF: ATCGTCTTCCAGGCTAAGTGTC
GSK8QR: TCTGGTTCGCATTGCTGTAGT
GSK9QF: AGTGAGCAGCCAGAGAACAGG
GSK9QR: TTATGTGCCCAGTTTCGGTC
GSK10QF: CTCTCGCTCTCCTCGGCTAA
GSK10QR: CTGCTCCATCCTGCTCAAAT
GSK11QF: TGGAGACTGGTGAGACTGTTGC
GSK11QR: GAGTGGCATCCTCTGGTTCA
ACTINQF: TCACTACGACTGCCGAGCGAG
ACTINQR: GAGCCACCACTGAGGACAACATTAC

Table S3. Primers of clone GSK and BZR1
Primer Sequence

GSK1F: CAAGCAGCCAAGCAGTGTGAAC
GSK1R: CAATATCACCGTCACCTGCAATC
GSK2F: ACCCGTCGATTGTAGTTGCTCAG
GSK2R: ATGCTACTGTGCGGTTAAACAGAAC
GSK3F: ATGGAAGGCGTACCGCTCG
GSK3R: CTAGGTCCTTAGCGCCATGAACA
GSK4F: CGCCAAGAGAGAACAGGACACTAC
GSK4R: GGTCAGATTCTACACCTTGAATTGC
GSK5F: CCTTGGACAGCAGTTTGTGCTG
GSK5R: TCATCGAGTCGTCATCCTCTTATCC
GSK6F: TCTGAGGGAGGAGGATGCATATG
GSK6R: CCGTCCACCTAATTCACTTCCTTC
GSK7F: CACCGAGGAGAGAGAAGCCTGTC
GSK7R: GCTACGGTCCACTCCCAAATAAG
GSK8F: AGCGGCGTCTGAACTCTGAACC
GSK8R: CTCCTAGCTGCTCCCGAAGTTGAC
GSK9F: GAGGAGGTTACAGAGATGGCTTCAG
GSK9R: AAGGCACGGTCATCTCACGATC
GSK10F: CTGTGAGGGAGAAGGATGCATATG
GSK10R: ACCGGTTCACTTCCTCATGTGTTC
GSK11F: ACGGGAGAGAGGACGTTCATTTC

GSK11R: AGCCTTCGCCTATGGTCCAGTAG
BZR1F: GCTGCGTTCAGACGACCACT
BZR1F: AGAGGAGCACCGTCCGAATA

Table S4. Primers of GSKs ligate to pGBKT7 and BZR1 to pGADT7

Primer Sequence	
GSK1BKF:	TCAGAGGAGGACCTGCATATGATGGAGGCGCCGCCG
GSK1BKR:	CCGCTGCAGGTCGACGGATCCCTAGCTCCCGGTATG
GSK2BKF:	TCAGAGGAGGACCTGCATATGATGACATCAGTAGGT
GSK2BKR:	CCGCTGCAGGTCGACGGATCCTCAAACTCCTAAGAA
GSK3BKF:	TCAGAGGAGGACCTGCATATGATGGAAGGCGTACCG
GSK3BKR:	CCGCTGCAGGTCGACGGATCCCTAGGTCCTTAGCGC
GSK4BKF:	TCAGAGGAGGACCTGCATATGATGGCAGCCATGCCG
GSK4BKR:	CCGCTGCAGGTCGACGGATCCCTATGGTCCAGCGGT
GSK5BKF:	TCAGAGGAGGACCTGCATATGATGGCCTCGGTGGGC
GSK5BKR:	CCGCTGCAGGTCGACGGATCCTCACCACCCTACGAA
GSK6BKF:	TCAGAGGAGGACCTGCATATGATGCATATGATGCGG
GSK6BKR:	CCGCTGCAGGTCGACGGATCCCTAATTCACTTCCTT
GSK7BKF:	TCAGAGGAGGACCTGCATATGATGGCCACCGCGCTC
GSK7BKR:	CCGCTGCAGGTCGACGGATCCCTACGGTCCACTCCC
GSK8BKF	TCAGAGGAGGACCTGCATATGATGGAGGCGCCGCCG
GSK8BKR:	CCGCTGCAGGTCGACGGATCCCTAGCTGCTCCCGAA
GSK9BKF:	TCAGAGGAGGACCTGCATATGATGGCTTCAGCTGGT
GSK9BKR:	CCGCTGCAGGTCGACGGATCCTCACGATCCAACATA
GSK10BKF:	TCAGAGGAGGACCTGCATATGATGCATATGATGCGG
GSK10BKR	CCGCTGCAGGTCGACGGATCCTCACTTCCTCATGTG
GSK11BKF:	TCAGAGGAGGACCTGCATATGATGGCCGCCATGCCG
GSK11BKR:	CCGCTGCAGGTCGACGGATCCCTATGGTCCAGTAGC
BZR1ADF:	GTACCAGATTACGCTCATATGATGACGAGCGGCGCC
BZR1ADR:	CAGCTCGAGCTCGATGGATCCTCAGGAAGGATCTGC

Table S5. Primers of GSKs ligate to p2913 and BZR1 to p3086

Primer Sequence	
2913GSK1F:	TCGAGCTCAAGCTTCGAATTCATGGAGGCGCCGCCG
2913GSK1R:	GCTCACCATCAGGATCCCGGGCTAGCTCCCGGTATG
2913GSK3F:	TCGAGCTCAAGCTTCGAATTCATGGAAGGCGTACCG
2913GSK3R:	GCTCACCATCAGGATCCCGGGCTAGGTCCTTAGCGC
2913GSK4F:	TCGAGCTCAAGCTTCGAATTCATGGCAGCCATGCCG
2913GSK4R:	GCTCACCATCAGGATCCCGGGCTATGGTCCAGCGGT
2913GSK7F:	TCGAGCTCAAGCTTCGAATTCATGGCCACCGCGCTC
2913GSK7R:	GCTCACCATCAGGATCCCGGGCTACGGTCCACTCCC
2913GSK8F:	TCGAGCTCAAGCTTCGAATTCATGGAGGCGCCGCCG
2913GSK8R:	GCTCACCATCAGGATCCCGGGCTAGCTGCTCCCGAA

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2913GSK11F:    TCGAGCTCAAGCTTCGAATTCATGGCCGCCATGCCG
2913GSK11R:    GCTCACCATCAGGATCCCGGGCTATGGTCCAGTAGC
3086BZR1F:     TCGAGCTCAAGCTTCGAATTCATGACGAGCGGCGCC
3086BZR1R:     CACGCTGCCCAGGATCCCGGGTCAGGAAGGATCTGC
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