

Table S1. Primers used for real time RT-qPCR in this study.

Gene	Forward Primer	Reverse Primer
<i>Tubulin</i>	5'-TGCATGATCTCCAACTCCACCAGT	5'-TCGTCGAACTCAGCACCAACTTCT
<i>TaHsfA1a</i>	5'-AGCATTCAGGATTCCCAGAT	5'-CCAGGCATTGCGAAATTCTC
<i>TaHsfA1b</i>	5'-AGCATTCAGGATTCCCAGAT	5'-TCAGGACCAGGCATTGCATA
<i>TaHsfA1c</i>	5'-ACATGAGTGCTGTGCCTTCG	5'-GATCTGGGAATCCTGGAATACTGA
<i>TaHsfA2a</i>	5'-ATTTTCGTCAATGCCGTGTTTA	5'-GCATACAGCCCAATCCGACT
<i>TaHsfA2b</i>	5'-CATCTGATCTCGACGGCTCA	5'-GCTTCACAGGTACCGAGACCAT
<i>TaHsfA2c</i>	5'-CCCAAATAGTCCAACCCTCTCA	5'-CGACACTTGCATAGGCACCA
<i>TaHsfA2d</i>	5'-TCTAGTGGGTGCTTGCGATT	5'-GCATACAGCCCAATCCGACT
<i>TaHsfA2e</i>	5'-CATCTGATCTCGACGCAGGTA	5'-GCTTCACAGGTACCGAGACCAT
<i>TaHsfA2f</i>	5'-CTGCTAGCTACTGTGGTCTAACG	5'-CTGACAATGCCAATACACACGA
<i>TaHsfA3a</i>	5'-TTCCCGACAAGCATGAGAAA	5'-GGGTCACCGATAACGCACCTT
<i>TaHsfA3b</i>	5'-TCCCGACAAGCCTGAGAGAT	5'-GGGTCGCCGATAACACACTT
<i>TaHsfA4a</i>	5'-CCAAGACCCTCCTGCTGATG	5'-CCTCCTGATGTGCATGGGATA
<i>TaHsfA4b</i>	5'-CCAAGACCCTCCTGCTGATG	5'-CCTGGTGTGCATGGGACA
<i>TaHsfA4c</i>	5'-TTCACCGGAGCTAGCAGAGC	5'-GTCGACTTCGGCCGTTGTAT
<i>TaHsfA4d</i>	5'-TCTTCACCGGAGATAGCAGAGTC	5'-GTCAACTTCGGCCATCGTCT
<i>TaHsfA4e</i>	5'-TCACCGGAGCTAGCGGAGT	5'-GTCGACTTCGGCCGTTGTAT
<i>TaHsfA4f</i>	5'-CCCAAGACCTTCCTGCTGAC	5'-CCAGGCTGCTCGGTAAGAAA
<i>TaHsfA5a</i>	5'-GGAGCACCACCATCAACGA	5'-CGACTGATGCCTTCGGGTTA
<i>TaHsfA5b</i>	5'-GCCATGGGCGTTAACCAG	5'-CTCTCGTGGCCTCAGTGCTT
<i>TaHsfA6a</i>	5'-ACGACTTCTGGGAGGAGCTG	5'-TCCTTTCCAGCTCTACCATCTCA
<i>TaHsfA6b</i>	5'-ACGACTTCTGGGAGGAGCTG	5'-CCTCCTCTCCAGCTCTAGCATC
<i>TaHsfA6c</i>	5'-AGCTGGACATCAACAGCGATT	5'-ACAGCCCAGACCCGCTCTTC
<i>TaHsfA6d</i>	5'-GGTGGCAACATGACTGGCTA	5'-CCCAGAGGTGCCATCAACA
<i>TaHsfA6e</i>	5'-GATGATTTTGGAGACGGAGACG	5'-ACTGCTGAGCCAGTTCATCG
<i>TaHsfA7a</i>	5'-GATCGACTCCTTTGCCTGCT	5'-AGTGATCATGATGAATTGTGCTGA

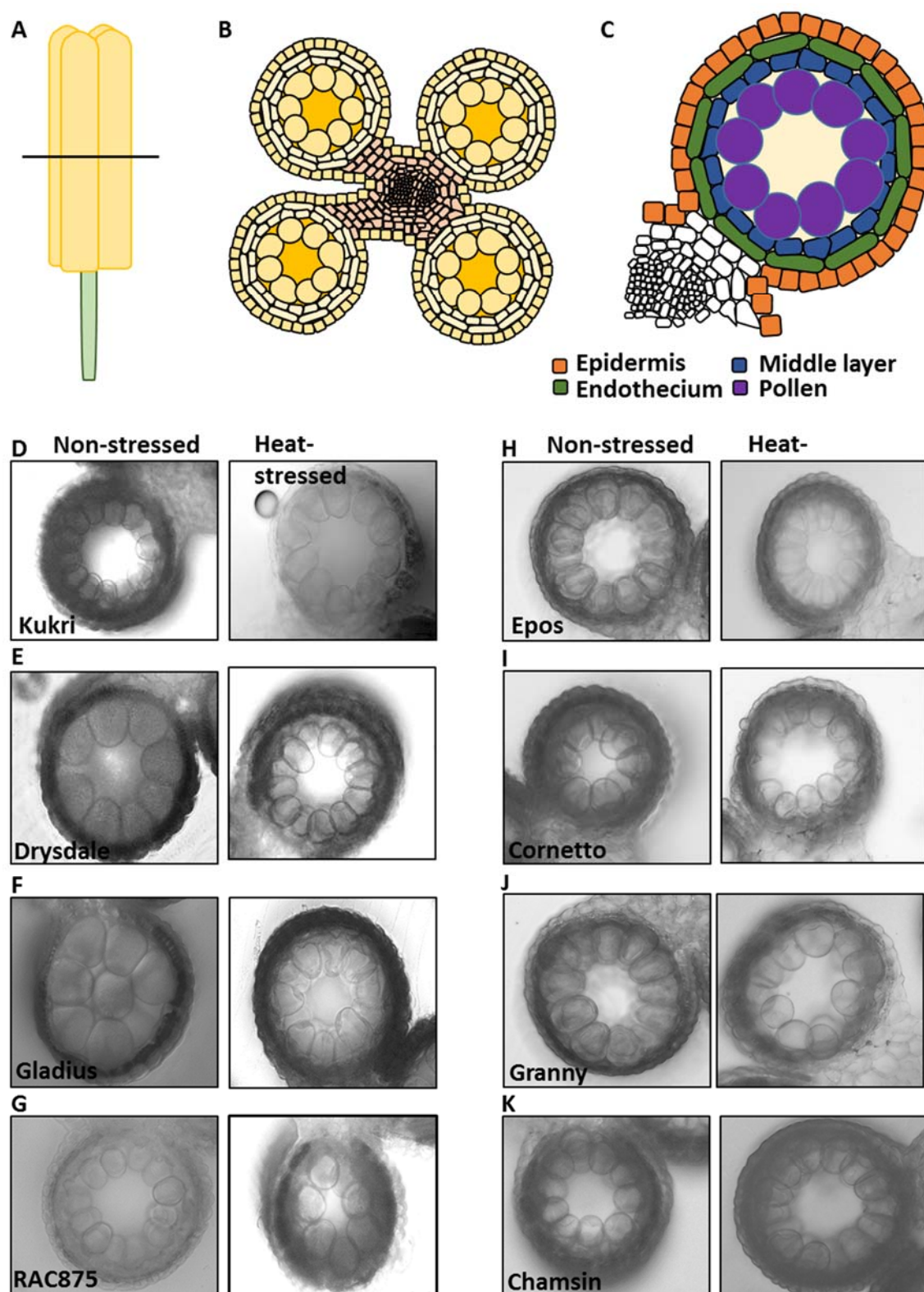


Figure S1. Cross sections of wheat anthers at stage 10. Samples were obtained from non- and heat-stressed wheat plants as indicated. (A-C) Cartoon illustrating cell layers of wheat anthers at stage 10. Please note that the tapetum cell layer is fully disintegrated. (D-G) Anther sections of Australian and European summer wheat varieties.