LEGENDS TO SUPPLEMENTAL MATERIAL

Figure S1. The pipeline of experimental manipulation associated with the ArrayPlate platform facilitates high-throughput activities and lends itself to robotic implementation, since all manipulations are done in a 96-well format.

Figure S2. Stoichiometric conversion of specific RNA to its stable DNA counterpart, via S1 nuclease protection, is achieved by addition to the sample lysate of a cocktail of 16 different nuclease protection probes, each in large excess. Protection probes hybridize to their specific target RNA molecules, forming a short double-stranded region. S1 nuclease, added in excess, acts to digest all single-stranded RNA and DNA, including unhybridized excess nuclease protection probes, leaving intact only the RNA/probe duplexes. Addition of base dissociates the duplexes and hydrolyzes the RNA, liberating the nuclease protection probes in single-stranded form, the amount of each being equal to the amount of its cognate RNA transcript in the initial sample. S1 nuclease and base treatment therefore removes all native DNA and RNA in the sample, thereby eliminating the possibility that these molecules may interfere with hybridization events on the array.

Figure S3. Dose-response of *Arabidopsis* plants to ABA treatment. Plants grown in 96 well plates for 10 days after germination were treated for four hours with the indicated concentrations of abscisic acid. A, The data are means of quadruplicate samples, normalized to the average transcript levels of actin and S-19, and the standard errors are shown. Transcript levels of three genes (KIN1, KIN2, and COR47) were elevated with an

EC_{50} of ~20 μM. Transcript levels for KIN1 and KIN2 were suppressed by treatments at ABA concentrations greater than 50 μM, whereas transcript levels for COR47 were not suppressed until the concentration of ABA exceeded 200 μM. B, The data from Figure S3A is shown using an ordinate expanded 10-times. The transcript levels for RD29A and ERD14 were elevated with an EC_{50} of ~ 20 μM, but were decreased at ABA concentrations greater than 100 μM.