



Supplementary Figure S3. Southern confirmation of the secondary metabolite mutants **A)** *Aspergillus fumigatus* $\Delta pksP$ southern confirmation in the ku70 deletion background. Genomic DNA was digested by PvuI. Expected band size was wild type (8007 and 4674bp) and $\Delta pksP$ (8215bp). TJW184.1 and TJW184.23 were chosen for the subsequent experiments. TFYL80.1 was a parent for TJW184.1 to 16 and CEA17 $\Delta akuB$; pyrG1 was a parent for TJW184.23. **B)** *Aspergillus fumigatus* $\Delta pksP$ southern confirmation in wild type ku70 background. Genomic DNA was digested by PvuI. Expected band size was wild type (8007 and 4674bp) and $\Delta pksP$ (8215bp). CC) TJW196.1, 2, 3, 4, 6, 7, 9, and 10 were correct. TJW196.1 was chosen for the subsequent experiments. Af293.1 was a parent for the deletion. **C)** *Aspergillus fumigatus* $\Delta fmqA$ southern confirmation in the ku70 deletion background. Genomic DNA was digested by SacII. Expected band size was wild type (8648, 4004 and 1930bp) and $\Delta fmqA$ (13846bp). All of transformants were correct. TJW200.1 was chosen for the subsequent experiments. TFYL80.1 was a parent for the deletion. **D)** *Aspergillus fumigatus* $\Delta tpcC$ southern confirmation in the wild type ku70 background. Genomic DNA was digested by SacI and MluI. Expected band size from the MluI digestion was wild type (10800bp) and $\Delta fmqA$ (3400bp). Expected band size from the SacI mutant was wild type (7500bp) and $\Delta fmqA$ (8900bp). All of transformants were correct. TFYL14.1 was chosen for the subsequent experiments. Af293.1 was a parent for the deletion. **E)** *Aspergillus fumigatus* $\Delta dmaW$ southern confirmation in deletion ku70 background. Genomic DNA was digested by PstI. Expected band size was wild type (2946bp) and $\Delta dmaW$ (3636bp). TTC32.1, 2, 3, 4, 5, and 6 were correct. TTC32.1 was chosen for the subsequent experiments. TBK 4.1 was a parent for the deletion. **F)** *Aspergillus fumigatus* $\Delta dmaW$ southern confirmation in wild type ku70 background. Genomic DNA was digested by PvuII. Expected band size was WT (390bp, 1817bp, and 5428bp) and $\Delta dmaW$ (390bp, 1817bp, 2070bp, and 4039bp). TTC31.29 and 30 were correct. TTC31.29 was chosen for the subsequent experiments. Af293.1 was a parent for the deletion.