

	MasterTaq (5 prime)	AccuStart II PCR SuperMix (Quanta Biosciences)	JumpStart Taq (Sigma)	Terra Taq (Clontech)	Phusion Polymerase (NEB)
Cycling	1. 97°C; 30 sec 2. 94°C; 15 sec 3. 55°C; 30 sec 4. 72°C; 30 sec +1 sec/cycle 39 cycles (steps 2-4) 5. 72°C; 10 min	1. 95°C; 2 min 2. 95°C; 15 sec 3. 60°C; 15 sec 4. 72°C; 20 sec 35 cycles (steps 2-4)	1. 95°C; 5 min 2. 95°C; 30 sec 3. 60°C; 30 sec 4. 68°C; 40 sec 5. cycles (steps 2-4) 6. 68°C; 5 min	1. 98°C; 2 min 2. 98°C; 10 sec 3. 60°C; 15 sec 4. 68°C; 1 min 26 cycles (steps 2-4)	1. 98°C; 30 sec 2. 98°C; 10 sec 3. 60°C*; 30 sec 4. 72°C; 30 sec 39 cycles (steps 2-4) 5. 72°C; 10 min *Annealing temp of 55°C was used for oligo cloning
PCR reaction	ddH ₂ O 16.4 µL 10x Buffer 2.5 µL 5 mM dNTPs 1.0 µL 10 µM F primer 1.0 µL 10 µM R primer 1.0 µL DNA 3.0 µL Polymerase 0.10 µL	ddH ₂ O 6.5 µL 2x Mix 12.5 µL 10 µM F primer 2.5 µL 10 µM R primer 2.5 µL DNA 1.0 µL	ddH ₂ O 6.5 µL 2x Mix 12.5 µL 10 µM F primer 2.5 µL 10 µM R primer 2.5 µL DNA 1.0 µL	ddH ₂ O 9.5 µL 2x Buffer 12.5 µL 10 µM F primer 0.75 µL 10 µM R primer 0.75 µL DNA 1.0 µL Taq 0.5 µL	ddH ₂ O 14.25 µL 5x Buffer 5.0 µL 5 mM dNTPs 1.0 µL 10 µM F primer 1.25 µL 10 µM R primer 1.25 µL DNA or 2.0 µL 10 ng oligo Polymerase 0.25 µL

Table S2. Cycling condition and reaction components for genotyping and cloning.