

# 1 **Supplementary Materials and Methods**

## 2 **5'- and 3'-region RACE-PCR conditions**

3 For the 5' RACE PCR, the first round of PCR was performed according to the following conditions: 1  
4 cycle of 95°C for 7 min; 55°C for 5 min; 72°C for 40 min; 25 cycles of 95°C for 30 sec, 55°C for 1 min 30  
5 sec, and 72°C for 1 min 30 sec; and 1 cycle of 95°C for 40 sec, 55°C for 1 min 30 sec, and 72°C for 15  
6 min. The second round of PCR was carried out as follows: 1 cycle of 95°C for 7 min; 40 cycles of 95°C  
7 for 30 sec, 55°C for 1 min, and 72°C for 1 min 30 sec; and 1 cycle of 72°C for 10 min.

8 In the case of 3' RACE PCR, the first round of PCR was performed as follows: 1 cycle of 95°C for 5 min;  
9 55°C for 5 min; 72°C for 30 min; and 25 cycles of 95°C for 30 sec, 55°C for 1 min, and 72°C for 1 min  
10 30 sec; and 1 cycle of 95°C for 40 sec, 55°C for 1 min 30 sec, and 72°C for 15 min. Nested PCR was  
11 performed according to the following conditions: 1 cycle of 95°C for 7 min followed by 40 cycles of  
12 95°C for 30 sec, 55°C for 1 min, and 72°C for 1 min; and 1 cycle of 72°C for 15 min.

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