

Supplementary Methods S2. Library Construction Parameters.

The RNA-seq library preparation utilized poly-A-tailed mRNA selection. Specifically:

Parameter	Specification
RNA Fragmentation	94°C, 8 min (Mg ²⁺ buffer, NEB)
cDNA Synthesis	25°C, 5 min; 50°C, 15 min (SuperScript IV)
Adapter Ligation	20°C, 15 min (1:10 adapter:insert)
Size Selection	0.6× AMPure XP beads
PCR Amplification	98°C, 30 s; 15 cycles: 98°C, 10 s, 60°C, 30 s, 72°C, 30 s