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Protocol status: Working
 We use this protocol and it's working

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Short insert size WGS libraries preparation for assembly of the *Lateolabrax maculatus* genome

In 1 collection

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GigaScience Press

BGI

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ABSTRACT

This protocol is used to clarify the process of the short insert size WGS libraries preparation for the *L. maculatus*.

MATERIALS

STEP MATERIALS

AMPure XP beads Beckman Coulter

T4 DNA
polymerase Enzymatics

AMPure XP beads Beckman Coulter

T4 DNA
polymerase Enzymatics

Genomic DNA interruption

- 1 The extracted DNA was sheared into fragments between 50 bp and ~800 bp in size using a Covaris E220 ultrasonicator (Covaris, Brighton, UK). Treat time 20s, Acoustic Duty Factor 25%, Peak Incident Power 500W, Cycles Per Burst 500, 24 cycles.

00:00:20

Fragment selection

- 2 Fragments between 150 bp and 250 bp or 200 to 500 bp were selected using AMPure XP beads (Agencourt, Beverly, the U.S.).

AMPure XP beads Beckman Coulter

End-repair

- 3 Repaired using T4 DNA polymerase, (ENZYMATICS, Beverly, the U.S.) 30 min. at 20 °C to obtain blunt ends which were then 3'-adenylated to create sticky ends.

T4 DNA
polymerase Enzymatics

00:30:00

20 °C

Add adapter

- 4 These DNA fragments were ligated at both ends to T-tailed adapters and amplified.

PCR amplification

- 5 The temperature profile was 3 min. at 95 °C followed by 8 cycles of 20 sec. at 98 °C, 15 sec. at 60 °C, 30 sec. at 72 °C, and more 10 min. at 72 °C for further elongation.

Library purification

- 6 AMPure XP beads (Agencourt, Beverly, the U.S.) was used to purify the PCR production.