Sequencing and de novo assembly of the red cusk-eel (Genypterus chilensis) transcriptome

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© 2014 Elsevier B.V. The red cusk-eel (Genypterus chilensis) is an endemic fish species distributed along the coasts of the Eastern South Pacific. Biological studies on this fish are scarce, and genomic information for G. chilensis is practically non-existent. Thus, transcriptome information for this species is an essential resource that will greatly enrich molecular information and benefit future studies of red cusk-eel biology. In this work, we obtained transcriptome information of G. chilensis using the Illumina platform. The RNA sequencing generated 66,307,362 and 59,925,554 paired-end reads from skeletal muscle and liver tissues, respectively. De novo assembly using the CLC Genomic Workbench version 7.0.3 produced 48,480 contigs and created a reference transcriptome with a N50 of 846. bp and average read coverage of 28.3. ×. By sequence similarity search for known proteins, a total of 21,272 (43.9%) contigs were annotated for their function. Out of these annotated contigs, 33.5% G