

**Gene transcripts showing temperature-dependent expression  
in mud loach, *Misgurnus mizolepis* liver**

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Fish are poikilotherms to adapt their physiology to external water temperature. Water temperature is one of notable factors that represent wide spectrum of influences on fish physiology including stress-response, growth and reproduction, which are frequently important parameters in most commercial productions of fish. The objective of this study is to identify the genes showing differential expression in liver of mud loaches that were acclimated to low and high water temperature, respectively. Based on our loach EST database, we have constructed a 998-gene cDNA microarray for mud loach liver, and examined the altered expression of gene transcripts under different acclimation temperatures. The robustness and significance of microarray result were confirmed by semi-quantitative and/or real-time RT-PCR with selected genes. Also selected clones were further subjected to the analysis of their full-length cDNA sequence and/or genomic structures.

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