



Isolation and identification of the immune-relevant ribosomal protein L10 (RPL10/QM-like gene) from the large yellow croaker *Pseudosciaena crocea* (Pisces: Sciaenidae)

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ABSTRACT. In order to investigate the immune role of ribosomal protein L10 (RPL10/QM-like gene) in marine fish, we challenged the large yellow croaker *Pseudosciaena* (= *Larimichthys*) *crocea*, the most important marine fish culture species in China, by injection with a mixture of the bacteria *Vibrio harveyi* and *V. parahaemolyticus* (3:1 in volume). Microarray analysis and real-time PCR were performed 24 and 48 h post-challenge to isolate and identify the QM-like gene from the gill *P. crocea* (designated PcQM). The expression level of the PcQM gene did not change significantly at 24 h post-challenge, but was significantly downregulated at 48 h post-challenge, suggesting that the gene had an immune-modulatory effect in *P. crocea*. Full-length PcQM cDNA and genomic sequences were obtained by rapid amplification of cDNA ends (RACE)-PCR. The sequence of the PcQM gene clustered together with

those of other QM-like genes from other aquatic organisms, indicating that the QM-like gene is highly conserved in teleosts.

Key words: Immune role; Microarray; Pathogen;
Pseudosciaena crocea; Ribosomal protein