

Marine pearl production is directly influenced by the growth speed of *Pinctada fucata martensii*. However, the slow growth rate of this organism remains the main challenge in aquaculture production. Epidermal growth factor receptor (EGFR), an important receptor of tyrosine kinases in animals, plays versatile functions in development, growth and tissue regeneration. In this study, we described the characteristic and function of an EGFR gene identified from *P. f. martensii* (*PmEGFR*). *PmEGFR* possesses a typical EGFR structure and is expressed in all studied tissues, with the highest expression level in adductor muscle. *PmEGFR* expression level is significantly higher in the fast-growing group than that in the slow-growing one. Correlation analysis represents that shell height and shell weight show positive correlation with *PmEGFR* expression ($p < 0.05$), and total weight and tissue weight exhibit positive correlation with it ($p < 0.01$). This study indicates that *PmEGFR* is a valuable functional gene associated with growth traits.