

Functional screening for salinity tolerant genes from *Acanthus ebracteatus* Vahl using *Escherichia coli* as a host

Abstract

Salinity reduces plant growth and crop production globally. The discovery of genes in salinity tolerant plants will provide the basis for effective genetic engineering strategies, leading to greater stress tolerance in economically important crops. In this study, we have identified and isolated 107 salinity tolerant candidate genes from a mangrove plant, *Acanthus ebracteatus* Vahl by using bacterial functional assay. Sequence analysis of these putative salinity tolerant cDNA candidates revealed that 65% of them have not been reported to be stress related and may have great potential for the elucidation of unique salinity tolerant mechanisms in mangrove. Among the genes identified were also genes that had previously been linked to stress response including salinity tolerance, verifying the reliability of this method in isolating salinity tolerant genes by using *E. coli* as a host.

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