

## Protein expression of Late Elongated Hypocotyl (LHY) homolog genes of teak in *Escherichia coli*.

### ABSTRACT

Expression of an isolated gene in a system that directly translates it into a protein is an important step to study the protein encoded by the gene. The isolated gene can be expressed *in vivo* by a heterologous system. In this study, a bacteria system was used to translate the *Tectona grandis* Late Elongated Hypocotyl (Tg-LHY) gene, which was isolated from flowering tissues of teak (*Tectona grandis*). The gene was cloned into the pET 14b vector (Novagen) and transformed into BL 21(DE3)/pLysS and Rosetta 2 expression host cells (Novagen). Rosetta 2 host cell has been found to be a good candidate to express the Tg-LHY protein from plant origin, as it recognizes the codon that was found in plant but rarely used in bacteria. The expressed protein was about an expected size, which was 90 kD. Western blot analysis using antibody against His-tag, which was fused to the Tg-LHY protein, proved that the expressed protein was Tg-LHY protein.

**Keyword:** Heterologous protein expression; *Tectona grandis*; LHY homolog genes.