

Molecular characterization of an unknown protein (Acc. No. EU795363) from the ESTs of oil palm (*Elaeis guineensis* Jacq.) cell suspension culture.

ABSTRACT

A large quantity of ESTs is available from various cDNA libraries of oil palm. The information from oil palm EST databases has been utilized to identify several interesting sequences for molecular characterization. In this study, we report molecular characterization of clone 583 (Acc. No. EU795363) isolated from cell suspension culture of oil palm. This clone is predicted to encode a single major open reading frame for a polypeptide of 177 amino acids with a predicted molecular mass of 19.6 kDa. The predicted amino acid sequence does not contain any signal peptide and transmembrane region. Based on Kyte-Doolittle hydrophathy profile, this protein is predicted to be a soluble protein. The predicted ORF of clone 583 was 59% identical to an amino acid sequence of an unknown protein from *Oryza sativa* (Acc. BAD25663). Southern analysis showed that this clone might be a member of a multigene family in the oil palm genome. Gene expression study by real time quantitative RT-PCR showed that transcripts of clone 583 might be present in low abundance.

Keyword: Molecular characterization; Unknown protein; Oil palm; *Elaeis guineensis*.