**Sequence and expression analysis of EgSAPK, a putative member of the serine/threonine protein kinases in oil palm (Elaeis guineensis Jacq.)**

ABSTRACT

In present study, EgSAPK (EU805512), an oil palm transcript coding for a putative SAPK protein kinase, have been molecular characterized. The cDNA for EgSAPK isolated from an oil palm cell suspension culture is 1470 bp in length with a longest Open Reading Frame (ORF) of 963 bp. No translation start codon could be identified so EgSAPK cDNA sequence is lacking the 5’-end. The deduced protein sequence shares 89% identity with the serine/threonine protein kinase SAPK9 from rice (AB125310.1). Real time PCR results showed that the expression levels of EgSAPK varied in different oil palm tissues and the EgSAPK gene shares a similar expression pattern with the SAPK gene of rice. Furthermore, the transcription of the EgSAPK gene in green embryo, white embryo and embryogenic calli tissues were higher than in non-embryogenic calli tissues. Southern blot analysis showed that the EgSAPK gene might be present as a single copy gene in the oil palm genome. These results suggest that EgSAPK may have a similar function as the SAPK gene of rice and thus can be a candidate marker for oil palm somatic embryogenesis.

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| **Keyword:** | Oil palm; Serine/threonine protein kinases; Real time PCR; Elaeis guineensis Jacq; SAPK. |