

Ethylene stimulation of latex yield depends on the expression of a sucrose transporter (HbSUT1B) in rubber tree (*Hevea brasiliensis*)

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Auteur	Dusotoit-Coucaud, A. [1], Kongsawadworakul, P. [2], Maurousset, L. [3], Viboonjun, U. [4], Brunel, N. [5], Pujade-Renaud, V. [6], Chrestin, H. [7], Sakr, Soulaiman [8]
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Mots-cl�s	ethylene [9], Latex yield [10], laticifers [11], sugar transporters [12]
R�sum� en anglais	<p><i>Hevea brasiliensis</i> is an important industrial crop for natural rubber production. Latex biosynthesis occurs in the cytoplasm of highly specialized latex cells and requires sucrose as the unique precursor. Ethylene stimulation of latex production results in high sugar flow from the surrounding cells of inner bark towards the latex cells. The aim of this work was to understand the role of seven sucrose transporters (<i>HbSUTs</i>) and one hexose transporter (<i>HbHXT1</i>) in this process. Two <i>Hevea</i> clones were used: PB217 and PB260, respectively described as high and low yielding clones. The expression pattern of these sugar transporters (<i>HbSUTs</i> and <i>HbHXT1</i>) was monitored under different physiological conditions and found to be maximal in latex cells. <i>HbSUT1</i>, one of the most abundant isoforms, displayed the greatest response to ethylene treatment. In clone PB217, ethylene treatment led to a higher accumulation of <i>HbSUT1B</i> in latex cells than in the inner bark tissues. Conversely, stronger expression of <i>HbSUT1B</i> was observed in inner bark tissues than in latex cells of PB260. A positive correlation with <i>HbSUT1B</i> transcript accumulation and increased latex production was further supported by its lower expression in latex cells of the virgin clone PB217.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua11700 [13]
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Liens

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