

ABA Influences the Accumulation in *Arabidopsis* of an Invertase Inhibitor Transcript Driven by CAMV35S Promoter**Hojoung Lee**

Division of Biotechnology, College of Life and Environmental Sciences, Korea University, 1, 5-ka Anam-dong, Sungbuk-ku, Seoul, 136-701, Korea.

Invertase (β -D-fructofuranosidase; EC 3.2.1.26) catalyzes the conversion of sucrose into glucose and fructose and is involved in an array of important processes, including phloem unloading, carbon partitioning, the response to pathogens, and the control of cell differentiation and development. Its importance may have caused the invertases to evolve into a multigene family whose members are regulated by a variety of different mechanisms, such as pH, sucrose levels, and inhibitor proteins. Although the putative invertase inhibitors in the genome of *Arabidopsis* are easy to locate, few studies have been conducted to elucidate their individual functions in plant growth and development because of their high redundancy. Here, to assess the functional role of the putative invertase inhibitors in *Arabidopsis*, we generated transgenic plants harboring one putative invertase inhibitor gene under the control of the 35S CaMV promoter. A transgenic plant that had high levels of the putative invertase inhibitor transcript when grown under normal conditions was chosen for the current study. To our surprise, the stability of the invertase inhibitor transcripts was shown to be down-regulated by the phytohormone ABA. It is well established that ABA enhances invertase activity *in vivo* but the underlying mechanisms are still poorly understood. Our results thus suggest that one way ABA regulates invertase activity is by down-regulating its inhibitor.