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研究简报

# 拟南芥中一个与ABA信号途径相关未知蛋白质的研究初报

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摘要：

利用酵母双杂交系统在拟南芥cDNA文库中筛选出1个与ABI2有相互作用的未知蛋白质（AC）。在酵母系统中的进一步研究表明，AC与ABI1、ABI2有相互作用，其作用依赖于ABI1、ABI2的PP2C活性。在大肠杆菌中表达和纯化了与预测结果一致的AC蛋白质。构建了真核过量表达载体，转化拟南芥后筛选和鉴定出转基因AC植株。转基因植株的生理性状分析表明，AC基因的过量表达降低了植物对ABA敏感性。研究初步证明AC可能是脱落酸信号传导途径中的1个新信号分子。

关键词： 脱落酸信号传导 未知蛋白质AC 转基因拟南芥 酵母双杂交系统

## Preliminary Study on One Novel Protein Involved in Abscisic |Acid （ABA） Signaling in Arabidopsis thaliana

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Abstract:

By using yeast two-hybrid system, we identified one novel protein which interacted with ABI2 in Arabidopsis cDNA library. The further investigation in yeast system revealed that AC interacted with both ABI1 and ABI2 and the interactions depended on the PP2C activity of ABI1 and ABI2. Expression and purification of AC in E. coli demonstrated that the molecular weight of AC was as same as prediction. Subsequently, we established the stable expression lines in Arabidopsis. The physiological analysis of transgenic plants indicated that the overexpression of AC in plant reduced the sensitivity of plant to ABA, suggesting that AC acted as a new signal factor in ABA signal transduction pathway.

Keywords: ABA signal transduction novel protein AC transgenic Arabidopsis yeast two hybrid system

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