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植物AP2/ERF类转录因子研究进展

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摘要 植物AP2/ERF是一个庞大的转录因子基因家族, 含有由60~70个氨基酸组成的AP2/ERF结构域而得名, 存在于所有的植物中。AP2/ERF转录因子参与多种生物学过程, 包括植物生长、花发育、果实发育、种子发育、损伤、病菌防御、高盐、干旱等环境胁迫响应等。AP2/ERF类转录因子参与水杨酸、茉莉酸、乙烯、脱落酸等多种信号转导途径, 而且是逆境信号交叉途径中的连接因子。文章对国内外近年来有关植物AP2/ERF类转录因子的分类、生物学功能、基因调控等方面的研究进行了综述。

关键词: AP2/ERF转录因子 生物学功能 研究进展

Abstract: Plant AP2/ERF transcription factor with AP2/ERF domain containing 60-70 amino acids is a huge gene family present in all plant. AP2/ERF transcriptional factors are involved in various biological functions such as plant development, flower development, fruit and seed maturation, wounding, pathogen defense, high salty, drought, and so on. AP2/ERF transcription factor are involved in salicylic acid, jasmonic acid, ethylene, abscisic acid signal transduction pathways and among them. The transcription factors are cross-talk factor in stress signal pathway. This paper summarizes the most advanced researches on types, biological functions, and gene regulations of plant AP2/ERF transcription factors.

Keywords: AP2/ERF transcription factor, biological functions, progress

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