

外源细胞分裂素对增强烟草培养细胞抗寒能力作用的研究 Research on Effect of External Cytokinin on Strengthening Cold Resistance of Cultured Cell Line in Tobacco

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摘要 黑暗条件下烟草培养细胞经过25℃、10℃和25℃不同温度阶段的培养时, 细胞生长能力和细胞内某些生化成分有变化, 激动素促进细胞在10℃低温时仍能生长, 促进细胞中的RNA和mRNA转录及蛋白质合成, 它们分别为对照的1.78、1.99和1.88倍。当细胞从10℃恢复到25℃下培养时, 添加激动素培养的细胞迅速生长。以上结果表明, 外源激动素有增加烟草悬浮培养细胞抗寒能力的作用。

When tobacco cell suspension cultured at different stages of 25℃, 10℃ and 25℃ in dark, growth ability and some biochemical composition of the cells appeared change. Even at low temperature of 10℃, Kinetin could promote cell growth although it was slower, and stimulate transcription of RNA, Mrna and protein synthesis in the cells, which were 1.78、1.99 and 1.88 times of control respectively. When the temperature elevated from 10℃ to 25℃, the cells grew quickly in the presence of kinetin. Those results showed that external kinetin have an effect on strengthening the ability of cold resistance of cultured cell line in tobacco.

关键词 [烟草细胞](#) [激动素](#) [细胞分裂素](#) [mRNA](#) [Key words](#) [Tobacco cell suspension](#) [Kinetin](#) [Cytokinin](#)
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