

D202

*Agrobacterium tumefaciens*에 의한 *RAG25* 유전자의 더덕  
(*Codonopsis lanceolata*)으로의 도입

신준혜\*, 한세연, 박민철  
가톨릭대학교 생명과학과

더덕(*Codonopsis lanceolata*)은 도라지과에 속하는 다년생의 초본식물로서 조직 배양연구가 최근 몇 년 전부터 이루어지고 있다. 본 연구에서는 더덕의 잎을 절편으로 사용하여 약 90%의 높은 재분화율을 획득하였으며 이러한 재분화 조건을 바탕으로 하여 더덕에 개화시기 조절유전자인 *RAG25* 유전자의 도입을 시도하였다. 더덕의 잎절편을 *Agrobacterium*과 3일동안 공조배양 하였으며 NAA 2 mg/l, BA 2 mg/l (N2B2)와 NAA 2 mg/l, BA 4 mg/l (N2B4)가 첨가된 배지에서 약 6주정도 배양하여 약 34%와 41%의 재분화율을 얻었다. 획득된 shoot에서 genomic DNA를 추출하고 NPTⅡ와 *RAG25* primer를 이용한 PCR을 수행하여 각각 0.7 Kb와 0.6 Kb의 band를 확인하였다.

D301

Regulation and Function of *Schizosaccharomyces pombe*  
LAMMER Kinase

Kun-Hoae Kim\*, Ji-Hoon Kim, Won-Wha Kang and Hee-Moon Park  
Department of Microbiology, Chungnam National University

We have previously cloned a *Schizosaccharomyces pombe* gene, *spLKH*, encoding a novel putative LAMMER kinase family member. To investigate the function of the *spLKH*, we had expressed the catalytic domain of *spLKH* in *E. coli* and performed kinase assay. *SpLKH* was efficiently autophosphorylated *in vitro* and phosphorylated various substrate such as histone, MBP. It means it has dual specific kinase activity, serine-threonine kinase and tyrosine kinase activity. Although *SpLKH* disruptant was viable, it showed abnormal elongated morphology and was flocculated in broth medium. In addition, the null mutant was more sensitive to oxidative stress and high osmotic stress than that of wild type. To find out the transcription initiation site, we performed primer extension and made GFP-fusion promoter analysis vector. Our results indicate that *spLKH* may play an important role in morphogenesis and defence mechanism against oxidative stress in the fission yeast.

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