

# 利用一步基因中断法构建克鲁氏乳酸酵母leu2突变体Construction of Kluyveromyces lactis leu2 Mutants by One-step Gene Disruption

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**摘要** 将克鲁氏乳酸酵母LEU2基因编码区的部分序列用酿酒酵母的URA3基因替换,然后用此段转化两株克鲁氏乳酸酵母。通过体内同源重组,部分缺失的外源leu2片段取代了酵母染色体上的正常的LEU2基因,由此得到leu2转化子。经过这些转化子在非选择条件下的稳定性测定,没有发现回复子。结果表明,用一步基因中断法成功地建立了稳定的LEU2基因突变体。这在克鲁氏乳酸酵母中构建有效的宿主-载体系统提供了一个有用的营养缺陷型选择标记。  
**Abstract:** The LEU2 gene of the yeast Kluyveromyces lactis was disrupted by replacing a part of the coding sequence with URA3 gene of the yeast S. cerevisiae. Transformation of two K. lactis strains with the disrupted leu2 fragment resulted in the substitution of partially deleted LEU2 gene for the wild-type LEU2 gene on the chromosome. Thus, two leu2 mutants were generated and no reversion could be detected after prolonged growth in the non-selective medium. The results show that the stable leu2 mutants have been constructed successfully by one-step gene disruption. The isolation of these mutants would provide a useful auxotrophic marker to facilitate the development of an efficient host-vector system in K. lactis.

**关键词** [关键词](#) [一步基因中断法](#) [LEU2基因](#) [克鲁氏乳酸酵母](#) [突变](#) **Key words** [One-step gene disruption](#) [LEU2 gene](#) [Kluyveromyces lactis](#) [Mutation](#)

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