

## 研究报告

### 水稻培矮64S(PA64S)基因组BAC文库的构建与分析

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摘要:

9311和培矮64S(PA64S)分别是我国超级杂交稻两优培9(LYP9)的父母本,9311的基因组已由北京基因组研究所测序,而PA64S至今仍无任何可供公众使用的基因组资源,对PA64S基因组的研究将有助于对9311和PA64S这对亲本基因组的比较研究和其上优良基因的克隆,为LYP9的基因组研究提供帮助。以水稻PA64S的幼嫩叶片作为材料,为该品种构建了第一个高覆盖率、高质量的BAC文库。该文库一共有37 632个克隆,平均插入片段为138 kb,覆盖水稻全基因组12倍左右,空载率仅为1.5%,线粒体和叶绿体污染率仅分别为0.35%和1.85%。该文库克隆被存放于98个384孔板中并储存在-80℃冰箱中,将作为公共基因组资源向研究者开放。

关键词: 水稻;PA64S;细菌人工染色体;基因组文库

### Construction and Analysis of a BAC Library of Rice PA64S Genome

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Abstract:

9311 and PA64S are the paternal and maternal cultivars of the super hybrid rice LYP9, respectively. The 9311 genome has been sequenced by Beijing Genomics Institute (BGI). However, for PA64S, no any public genomic resource is available to date. Research on PA64S genome will help in comparative studies between and cloning of agriculturally important genes from the two parental genomes 9311 and PA64S, facilitating the studies on LYP9 genome. In this paper, the first large insert and deep coverage BAC library for PA64S was constructed, taking the young tender leaf blade of PA64S as material. The library contains 37 632 clones with an average insert size of 138 kb, representing nearly 12-fold of rice genome. The empty-vector rate is only 1.5% and the mitochondrial and chloroplast DNA contamination rates are 0.35% and 1.85%, respectively. The clones have been deposited in 98 of 384-well plates and stored at -80℃ freezers, and are accessible to research communities as a public genome resource.

Keywords: rice PA64S BAC genomic DNA library

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