

植物生产层

柱花草总RNA提取方法比较

张倩茜, 张伟丽, 刘凤民, 许修宏, 庞丹丹

摘要:

以热研2号柱花草 (*Stylosanthes guianensis* Reyan No.2) 叶片为材料, 利用紫外分光光度计和凝胶电泳法比较SDS 酚抽提法、CTAB法、Trizol试剂盒和柱式植物RNAout试剂盒法提取柱花草总RNA的质量和纯度。结果表明, 改良CTAB法和柱式植物RNAout试剂盒法提取的RNA的OD260 nm/OD280 nm分别是1.85和1.93, OD260 nm/OD230 nm均大于2.0。凝胶电泳结果表明, 改良CTAB法及柱式植物RNAout试剂盒法均有28S rRNA和18S rRNA两条清晰的条带, 且无降解。其他两种方法获得的RNA品质较差, 有降解和弥散现象。将改良CTAB法和柱式植物RNAout试剂盒法提取的RNA逆转录成cDNA, cDNA能扩增出一条清晰的 β actin基因片段, 进一步证明了改良CTAB法和柱式植物RNAout试剂盒法提取的总RNA具有很高的纯度, 其中柱式植物RNAout试剂盒法的效果好于改良CTAB法。

关键词: 柱花草 总RNA 提取方法 RT PCR

Extraction methods of total RNA from *Stylosanthes guianensis*

ZHANG Qian qian2, ZHANG Wei li, LIU Feng min, XU Xiu hong, PANG Dan dan

Abstract:

The modified SDS phenol extraction method, Modified CTAB method, common Trizol and Column Plant RNAout were used to extract total RNA in leaf of *Stylosanthes guianensis* Reyan No.2, respectively. The quality and quantity of total RNA from above mentioned methods were compared to select the better methods by UV spectrometer and gel electrophoresis. This study indicated that the value of OD260 nm/OD230 nm of RNA extracted by modified CTAB method and Column Plant RNAout method were higher than 2.0 and the value of OD260 nm/OD280 nm of RNA extracted by modified CTAB method and Column Plant RNAout were 1.85 and 1.93, respectively. Gel electrophoresis showed that RNA extracted by modified CTAB had clearer bands of 28S rRNA and 18S rRNA and they did not degrade, and that RNA extracted by Column Plant RNAout had two clearer bands of 28S rRNA and 18S rRNA and they did not degrade; however, RNA extracted by other two methods degraded and dispersed to some degrees. RNA extracted by modified CTAB method and Column Plant RNAout could be reversed to cDNA. The cDNA was amplified and one clear bands of β actin gene fragment was observed in agarose gel. These results further demonstrated that the quality and purity of the total RNA extracted by modified CTAB and Column Plant RNAout could be applied into molecular biology experiment, and quality and purity of the total RNA by Column Plant RNAout method were better than that by modified CTAB method.

Keywords: *Stylosanthes guianensis* total RNA extraction methods RT PCR

收稿日期 修回日期 网络版发布日期

DOI:

基金项目:

扩展功能

本文信息

- Supporting info
- PDF(482KB)
- [HTML全文]
- 参考文献PDF
- 参考文献

服务与反馈

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- 引用本文
- Email Alert
- 文章反馈
- 浏览反馈信息

本文关键词相关文章

- 柱花草
- 总RNA
- 提取方法
- RT PCR

本文作者相关文章

PubMed

通讯作者:

作者简介:

作者Email:

参考文献:

本刊中的类似文章

1. 刘彦,丁荣荣,汪峰,伊海燕.19个苜蓿品种的耐盐碱试验研究[J].草业科学,2010,27(05):62-66
2. 李岩,王铁梅,卢欣石.根蘖型苜蓿根部RNA提取方法的比较[J].草业科学,2010,27(05):67-71
3. 韦红群,邓建珍,曹建华,谢磊林,梁钧淞,蒋健波.柱花草根系与根际微生物类群的研究[J].草业科学,2009,26(01):69-73
4. 惠文森,穆晓峰,王康英.草坪草屑叶蛋白质提取方法研究[J].草业科学,2009,26(03):108-110
5. 刘凤民,张伟丽,余土元,刘胜洪.锌贝克、崇高和易斑净对柱花草炭疽病的防效[J].草业科学,2009,26(08):152-157
6. 莫亿伟,钱善勤,陈泰林.水杨酸和硝普钠处理增强柱花草抗寒性[J].草业科学,2010,27(11):77-81
7. 张明忠,史亮涛,龙会英,金杰,纪中华,何光熊,邵庆勇.灌溉对柱花草和坚尼草产量与品质的影响[J].草业科学,2011,28(12):2175-2178
8. 余爱,董兆佳,杨帆,兀彦龙,卢庆富,唐树梅.柱花草硼、钼微肥施用效果的研究[J].草业科学,2011,28(04):611-613
9. 张磊,刘志鹏,张吉宇,张妙青,王彦荣.箭筈豌豆甘油醛-3-磷酸脱氢酶基因片段的克隆及序列分析[J].草业科学,2011,28(05):753-757
10. 张楠,朱维宁,苏君艺,张林生.扁穗冰草转录因子基因的克隆和表达特性的分析[J].草业科学,2011,28(09):1618-1622

Copyright by 草业科学