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论文

铁皮石斛野生居群遗传多样性的RAPD分析与鉴别

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摘要:

目的采用RAPD分子标记技术,对铁皮石斛8个野生居群的遗传多样性、亲缘关系以及分子鉴别等进行研究。方法 筛选随机引物进行RAPD分析,通过UPGMA聚类,研究铁皮石斛各居群间的遗传关系,构建居群亲缘关系的分子系 统树;利用特异性条带对铁皮石斛野生居群进行指纹分析鉴别。结果共筛选出10个有效引物,在8个野生居群材料 的RAPD扩增中共得到439个位点,平均每个引物扩增出43.9个位点,每个居群扩增出54.9个位点;在所获得的 104条可重现谱带中,9条是单态的,95条是多态的,多态性程度达91.35%,遗传距离在0.590~0.727之间,平 均为0.686。结论铁皮石斛居群间遗传差异明显,具有较丰富的遗传多样性;RAPD可以作为铁皮石斛野生居群遗 传多态性、居群亲缘关系和分子鉴别研究的有效手段;引物S412可以有效鉴别铁皮石斛的8个野生居群。

关键词: 铁皮石斛 居群 遗传多样性 RAPD 鉴别

Genetic diversity and molecular authentication of wild populations of *Dendrobium* officinale by RAPD

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Abstract:

AimGenetic diversity, relationship and molecular authentication of total 8 wild populations of *Dendrobium* 》 唐凤 officinale were investigated using RAPD markers. Methods10 random decamer primers were screened for Random Amplified Polymophic DNA (RAPD) fragments. A DNA molecular dendrogram was established based on cluster analysis by UPGMA (unweighted pair-group method with arithmetic average), and the relationship of the wild populations were analyzed, and all the wild populations were authenticated. ResultsA total of 439 loci with an average of 43.9 loci per primer and 54.9 loci per population were amplified from 8 wild populations by 10 effective primers. In the total 104 amplified bands, 95 were polymorphic, corresponding to 91.35% genetic polymorphism. The genetic distances were 0.590 to 0.727, with an average of 0.686. ConclusionDistinct genetic differences and extensive genetic diversity were presented among the wild populations. RAPD markers were an informative and useful tool for the genetic diversity, evaluation and authentication of wild populations of Dendrobium officinale. Primer S412 could be used to authenticate 8 wild populations completely.

Keywords: population genetic diversity RAPD authentication Dendrobium officinale

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- 1. 丁小余; 徐珞珊; 徐红; 王峥涛; 周开亚. 曲茎石斛及其近似种鉴别的形态和DNA分子证据[J]. 药学学报, 2001,36 (11): 868-873
- 2. 刘瑞驹;蒙爱东;邓锡青;李月榕.铁皮石斛试管苗快速繁殖的研究[J]. 药学学报, 1988,23(8): 636-640

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