

附表 1 飘带兜兰 6 个个体的叶绿体基因组编码基因

Attached table 1 Gene contents in chloroplast genomes of six *Paphiopedilum parishii* individuals

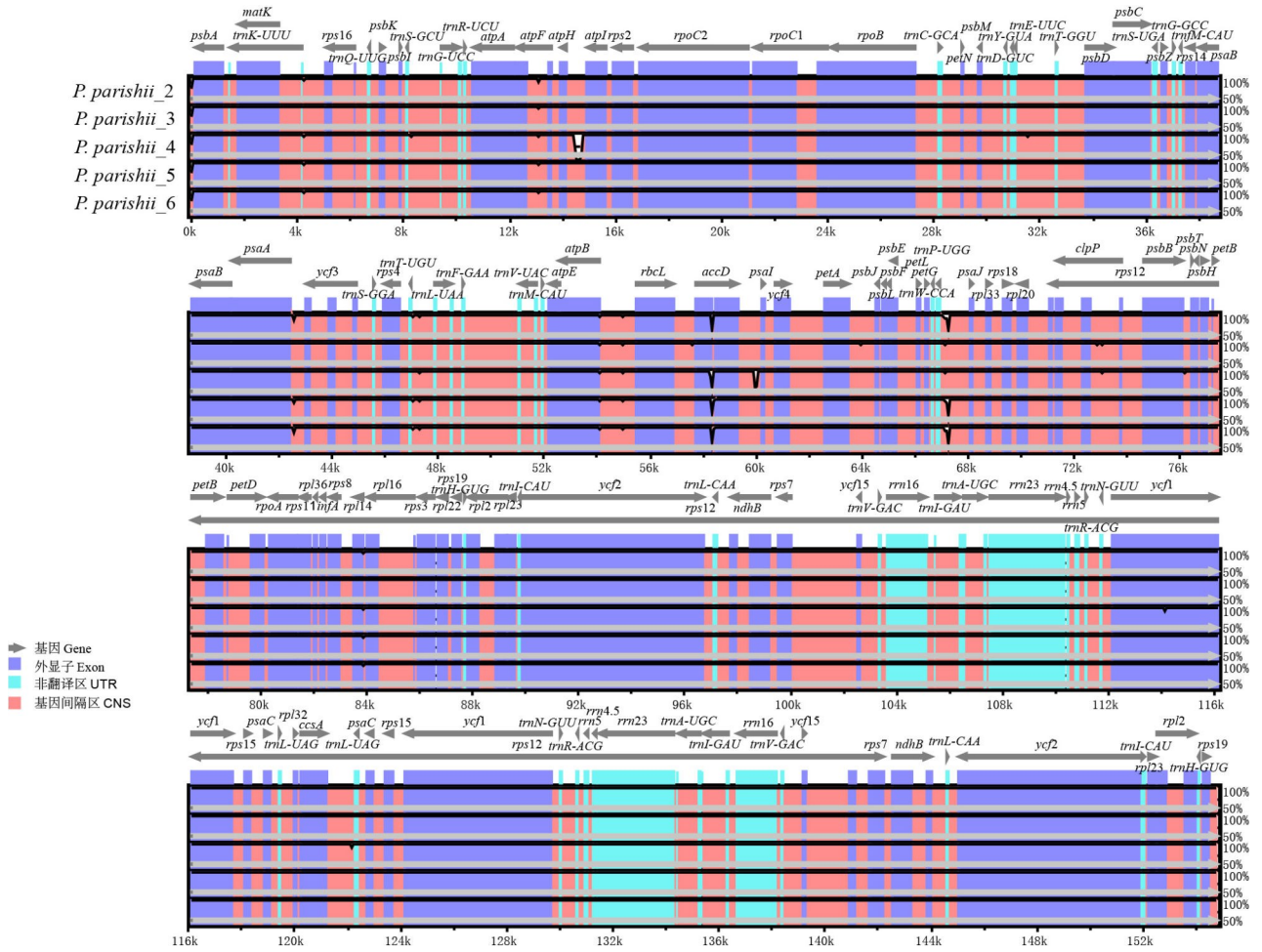
基因分组 Group of genes	基因名称 Gene names
1 光系统 I Photosystem I	<i>psaA</i> , <i>psaB</i> , <i>psaC</i> (×2), <i>psaI</i> , <i>psaJ</i>
2 光系统 II Photosystem II	<i>psbA</i> , <i>psbB</i> , <i>psbC</i> , <i>psbD</i> , <i>psbE</i> , <i>psbF</i> , <i>psbH</i> , <i>psbI</i> , <i>psbJ</i> , <i>psbK</i> , <i>psbL</i> , <i>psbM</i> , <i>psbN</i> , <i>psbT</i> , <i>psbZ</i>
3 细胞色素 b/f 复合物 Cytochrome b/f complex	<i>petA</i> , <i>petB</i> * , <i>petD</i> * , <i>petG</i> , <i>petL</i> , <i>petN</i>
4 ATP 合成酶 ATP synthase	<i>atpA</i> , <i>atpB</i> , <i>atpE</i> , <i>atpF</i> * , <i>atpH</i> , <i>atpI</i>
5 NADH 脱氢酶 NADH dehydrogenase	<i>ndhB</i> * (×2), <i>ndhD</i> ^Δ , <i>ndhJ</i> ^Δ
6 二磷酸核酮糖羧化酶大亚基 RubisCO large subunit	<i>rbcL</i>
7 RNA 聚合酶亚基 RNA polymerase	<i>rpoA</i> , <i>rpoB</i> , <i>rpoC1</i> * , <i>rpoC2</i>
8 核糖体蛋白小亚基 Small subunit of ribosomal proteins (SSU)	<i>rps2</i> , <i>rps3</i> , <i>rps4</i> , <i>rps7</i> (×2), <i>rps8</i> , <i>rps11</i> , <i>rps12</i> (×2), <i>rps14</i> , <i>rps15</i> (×2), <i>rps16</i> * , <i>rps18</i> , <i>rps19</i> (×2)
9 核糖体蛋白大亚基 Large subunit of ribosomal proteins (LSU)	<i>rpl2</i> * (×2), <i>rpl14</i> , <i>rpl16</i> * , <i>rpl20</i> , <i>rpl22</i> , <i>rpl23</i> (×2), <i>rpl32</i> , <i>rpl33</i> , <i>rpl36</i>
10 其他基因 Other genes	<i>clpP</i> ** , <i>matK</i> , <i>accD</i> * , <i>ccsA</i> , <i>infA</i>
11 未知功能基因 Gene of unknown function	<i>yef1</i> (×2), <i>yef2</i> (×2), <i>yef3</i> * * , <i>yef4</i> , <i>yef15</i> (×2) ^Δ
12 核糖体 RNA Ribosomal RNAs	<i>rrn4.5</i> (×2), <i>rrn5</i> (×2), <i>rrn16</i> (×2), <i>rrn23</i> (×2)
13 转运 RNA Transfer RNAs	<i>trnA-UGC</i> * (×2), <i>trnC-GCA</i> , <i>trnD-GUC</i> , <i>trnE-UUC</i> , <i>trnF-GAA</i> , <i>trnFM-CAU</i> , <i>trnG-GCC</i> , <i>trnG-UCC</i> * , <i>trnH-GUG</i> (×2), <i>trnI-CAU</i> (×2), <i>trnI-GAU</i> * (×2), <i>trnK-UUU</i> * , <i>trnL-CAA</i> (×2), <i>trnL-UAA</i> * , <i>trnL-UAG</i> (×2), <i>trnM-CAU</i> , <i>trnN-GUU</i> (×2), <i>trnP-UGG</i> , <i>trnQ-UUG</i> , <i>trnR-ACG</i> (×2), <i>trnR-UCU</i> , <i>trnS-GCU</i> , <i>trnS-GGA</i> , <i>trnS-UGA</i> , <i>trnT-GGU</i> , <i>trnT-UGU</i> , <i>trnV-GAC</i> (×2), <i>trnV-UAC</i> * , <i>trnW-CCA</i> , <i>trnY-GUA</i>

注: * 表示具有一个内含子的基因; ** 表示具有两个内含子的基因; (×2) 表示有两个拷贝的基因; Δ 表示假基因。

Note: * indicates gene containing one intron; ** indicates gene containing two introns; (×2) indicates gene containing two copies; Δ indicates pseudogene.

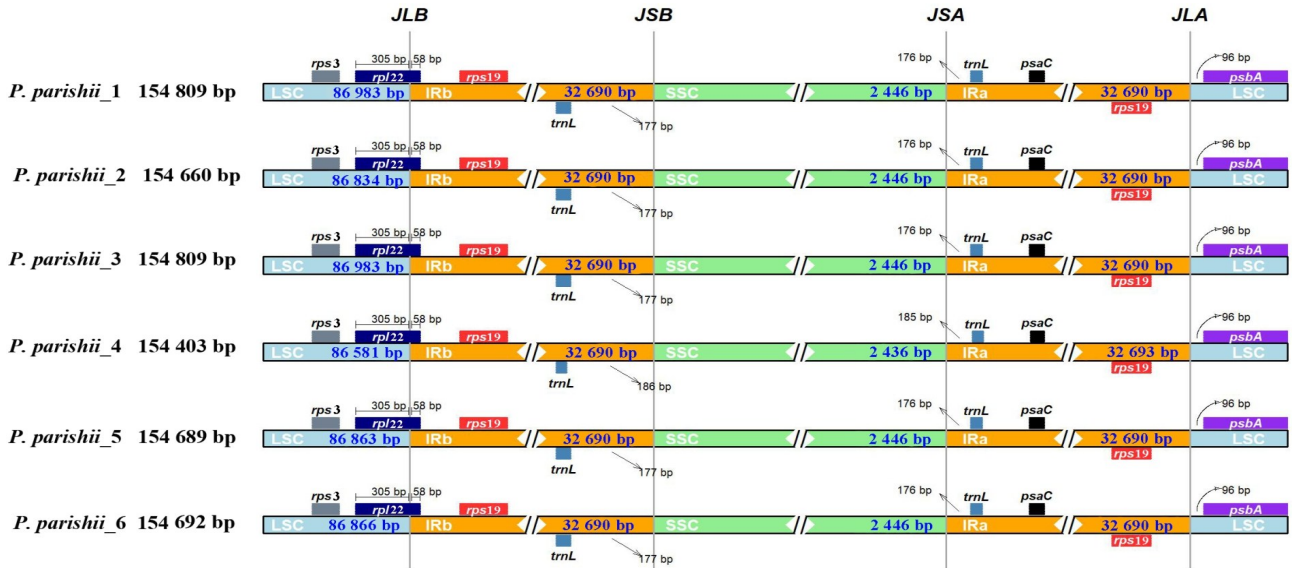
附表 2 飘带兜兰 6 个个体的叶绿体基因组 SSR 位点类型和数量
Attached table 2 Types and amounts of simple sequence repeats (SSRs) identified
in the chloroplast genomes of six *Paphiopedilum parishii* individuals

SSR 类型 SSR type	<i>P. parishii</i> _1		<i>P. parishii</i> _2		<i>P. parishii</i> _3		<i>P. parishii</i> _4		<i>P. parishii</i> _5		<i>P. parishii</i> _6	
	数目 Number	比例 Ratio (%)	数目 Number	比例 Ratio (%)	数目 Number	比例 Ratio (%)	数目 Number	比例 Ratio (%)	数目 Number	比例 Ratio (%)	数目 Number	比例 Ratio (%)
单核苷酸重复 Mononucleotide repeats	51	48	47	46	51	48	47	46	48	46	48	46
二核苷酸重复 Dinucleotide repeats	20	19	20	19	20	19	20	19	20	19	20	19
三核苷酸重复 Trinucleotide repeats	15	14	15	15	15	14	15	15	15	14	15	14
四核苷酸重复 Tetranucleotide repeats	14	13	14	14	14	13	14	14	14	13	14	13
五核苷酸重复 Pentanucleotide repeats	2	2	2	2	2	2	2	2	2	2	2	2
六核苷酸重复 Hexanucleotide repeats	5	5	5	5	5	5	5	5	5	5	5	5
总数 Total	107		103		107		103		104		104	



参考序列为 *Paphiopedilum parishii_1*。X 轴对应叶绿体基因组内的坐标。Y 轴显示 50% ~ 100% 范围内的百分比。
 With *Paphiopedilum parishii_1* as a reference. The X-axis corresponds to coordinates within the chloroplast genome. The Y-axis shows the percentage identity in the range 50%–100%.

附图 1 飘带兜兰 6 个个体的叶绿体基因序列比对
 Attached fig. 1 Alignment of chloroplast genomes sequences of six *Paphiopedilum parishii* individuals

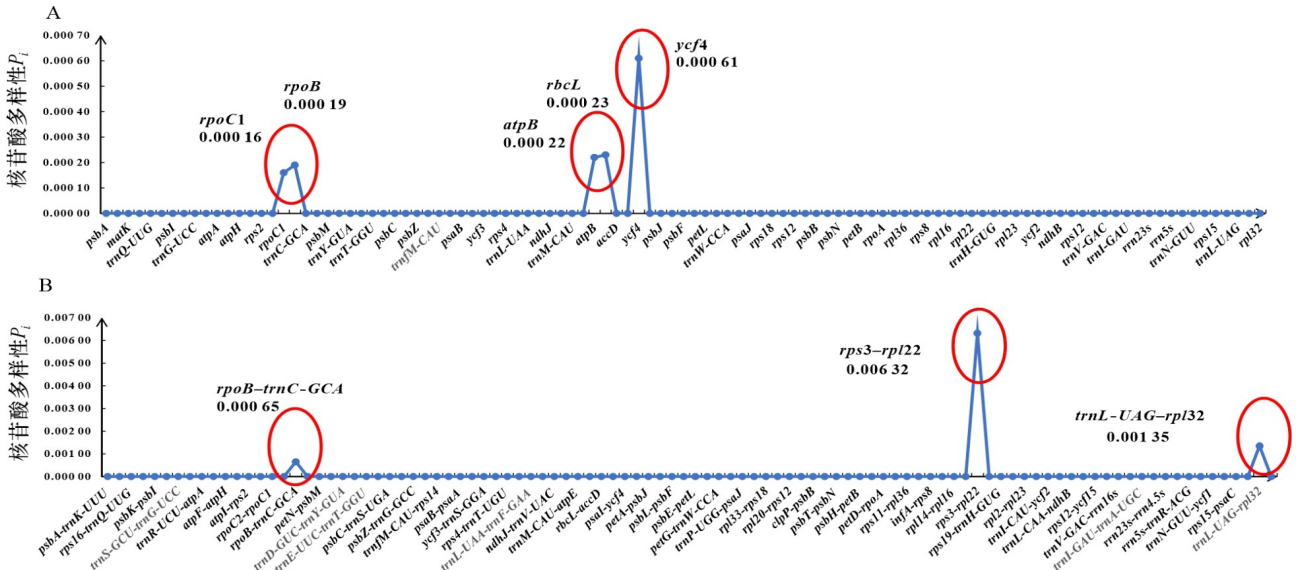


JLB, JSB, JSA, JLA 分别是 LSC/IRb, SSC/IRb, SSC/IRa 和 LSC/IRa 的边界。

JLB, JSB, JSA, JLA refer to junction boundary between LSC/IRb, SSC/IRb, SSC/IRa, and LSC/IRa, respectively.

附图 2 6 条飘带兜兰叶绿体基因组 LSC、IRs、SSC 边界比较

Attached fig. 2 Comparison of LSC, IRs, SSC boundaries among six *Paphiopedilum parishii* chloroplast genomes



A. 基因编码区核苷酸多样性; B. 基因间隔区核苷酸多样性。

A. Nucleotide diversity (P_i) values of coding genes in the LSC, SSC, and IR regions; B. Nucleotide diversity (P_i) values of intergenic genes in LSC, SSC, and IR regions.

附图 3 飘带兜兰 6 个个体叶绿体基因组核苷酸多样性比对分析

Attached fig. 3 Comparative analysis of nucleotide diversity values (P_i) among the chloroplast genomes of six *Paphiopedilum parishii* individuals