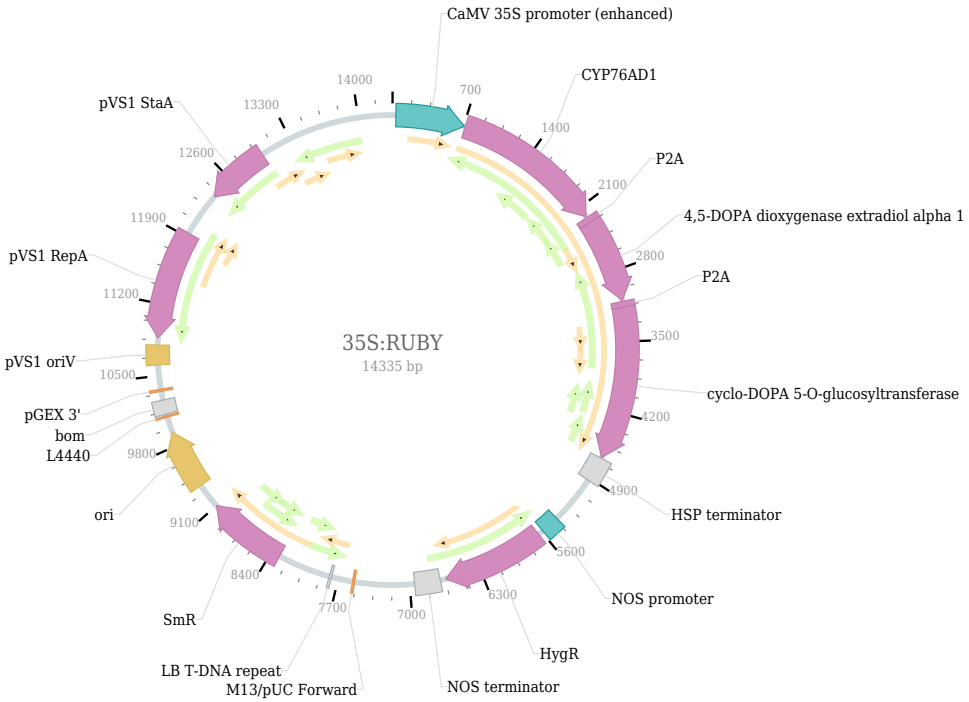
35S:RUBY

载体编号 Vector ID	V001191
抗性 Antibiotic Resistance	Spectinomycin
长度 Length	14335 bp
载体类型 Vector Type	Plant Expression
宿主 Host	Plants

产品信息

复制子 Replication Origin	ori
启动子 Promoter	CaMV 35S (enhanced)
克隆方法 Cloning Method	Gibson Cloning
5' 引物 5' Primer	CCTGTCAAACACTGATAGTTTtgagacttttcaacaaagggt
3' 引物 3' Primer	GCTTACTCAGTTAGGTCTAGCTTATCTTTAATCATATTCCATAGTCCA
培养菌株 Growth Strain(s)	Stbl3
培养温度 Growth Temperature	37℃
备注 Comment	RUBY reporter converts tyrosine to vividly red betalain, which is clearly visible to naked eyes without the need of using special equipment or chemical treatments. Tyrosine is first hydroxylated on the benzene ring, resulting in L-3,4-dihydroxyphenylalanine (L-DOPA). The reaction is catalyzed by the P450 oxygenase CYP76AD1. L-DOPA can be further oxidized into cyclo-DOPA by CYP76AD1. Alternatively, L-DOPA is catalyzed by L-DOPA 4,5-dioxygenase (DODA) into betalamic acid, which is subsequently condensed with cyclo-DOPA into betanidin. The condensation reaction does not require an enzyme. Finally, a sugar moiety is added to betanidin by a glucosyltransferase to generate the colorful betalain. CYP76AD1, DODA, and Glucosyltransferase were organized into a single open reading frame to form the RUBY reporter and the three genes were linked by sequences that encode 2A peptides.

质粒图谱



复溶方法

1. Centrifuge at 5,000×g for 5 min.
2. Carefully open the tube and add sterile water to dissolve the DNA: add 20 μl for 5 μg plasmid, and 100 μl for 100 μg plasmid.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin to concentrate the liquid at the bottom. Speed is less than 5000×g.
5. Store the plasmid at -20 ℃.