Supplemental Table S2: Primers used in this study for the amplification of the polymorphic cpDNA regions in *Silene ciliata*. «Region» lists all the polymorphic cpDNA regions of genus *Silene* or *Silenea* tribe, while «Primer» and «Sequence» provide all the names of the selected primers and their complete nucleotide sequence. «Reference» and «*Silene* sp. » indicate the bibliographical record of the study and species, where each set of primers was tested for the first time, respectively. Finally, «Program» describes the conditions in which each Polymerase Chain Reaction was performed.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Region | Primer |  | Sequence | Reference | *Silene* sp. | Program |
| *trnS-trnG intron* | *trnS(GCU)* | F | GCCGCTTTAGTCCACTCAGC | (Hamilton, 1999; Sloan et al., 2012) | *S. vulgaris &* *S. latifolia* | 95ºC 5min; 40 ciclos: 95ºC 30 sec, 52ºC 1 min, 72ºC 1 min; 72ºC 7min |
|  | *trnG(UCC)* | R | GAACGAATCACACTTTTACCAC | (Ingvarsson & Taylor, 2002) |  |  |
| *matK* | *Kim3F* | F | CGTACAGTACTTTTGTGTTTACGAG | (Sloan et al., 2009) | *S. ciliata* | 95ºC 3 min, 40 ciclos: 95ºC30 sec, 49ºC 30sec, 72ºC 1 min; 72ºC 10min |
|  | *Kim1R* | R | ACCCAGTCCATCTGGAAATCTTGGTTC |  |  |  |
| *rbcL* | *rbcL1F* | F | ATGTCACCACAAACAGAAAC | (pers. comm. García-Fernández A.) | *S. ciliata* | 94ªC 3 min; 38 ciclos: 94ªC 1min, 50ªC 50 sec, 72ªC 1 min; 72ªC 8 min) |
|  | *rbcL724r* | R | TCGCATGTACCTGCAGTAGC |  |  |  |
|  | *S1\_For* | F | ATGTCACCACAAACAGAGACT |  |  | 95ºC 3 min, 33 cycles: 94ºC 30sec; 55ºC 30sec, 72ºC 1min, 72ºC 10 min |
|  | *SI\_Rev* | R | AAATCAAGTCCACCRCG |  |  |  |
| *rps16* | *rpsF2a* | F | CTTGAAGGACATGATCTGTTGTGGA | (Oxelman, Lidén &  Berglund, 1997) | tribe *Sileneae* | 95ºC 2 min; 33 ciclos: 95ªC 30 sec, 57ºC 1 min, 72ªC 2 min; 72ªC 7 min |
|  | *rpsR2* | R | CGATAGACGGCTCATTGGGATA | (pers. comm. Giménez-Benavides L., Prieto-Benítez S.) | *S. ciliata* |  |
| *psbA-trnH* | *trnH(GUG)* | F | ACTGCCTTGATCCACTTGGC | (Hamilton, 1999) | *S. vulgaris & S. latifolia* | 95ºC 4min; 35 ciclos: 95º30sec, 53ºC 45sec, 72ºC 45sec; 72ºC 7 min |
|  | *psbA* | R | CGAAGCTCCATCTACAAATGG | (Ingvarsson &Taylor, 2002) |  |  |
| *trnL* | *trnc* | F | CGAAATCGGTAGACGCTACG | (Taberlet et al., 1991) | *S. vulgaris & S. latifolia* | 95ªC 2,5 min; 38 ciclos: 95ªC 1 min, 53ªC 45 sec, 72ªC 1 min; 72ª 7 min |
|  | *trnd* | R | GGGATAGAGGGACTTGAACC | (Ingvarsson, Ribstein &  Taylor, 2003) |  |  |
| *trnL-trnF spacer* | *trne* | F | GGTTCAAGTCCCTCTATCCC | (Taberlet et al., 1991) |  | 95ªC 2,5 min; 38 ciclos: 95ªC 1 min, 53ªC 45 sec, 72ªC 1 min; 72ª 7 min |
|  | *trnf* | R | ATTTGAACTGGTGACACGAG | (Cotrim, 2001) | *S. nutans* |  |
| *psb-psbL spacer* | *psbE-RF* | F | TATCGAATACTGGTAATAATATCAGC | (Popp et al., 2005) | 23 Silene species | 95ºC 5min; 40 ciclos: 95ºC 30 sec, 56ºC 1 min, 72ºC 1 min; 72ºC 10 min |
|  | *petL-R* | R | ATAAGTCGTATCTTGTTYAGACCTA |  |  |  |
| *rpL32-trnL* | *trnLUAG* | R | CTGCTTCCTAAGAGCAGCGT | (López-Vinyallonga et al., 2012) | *S. sennenni* | 95ºC 3min; 34 ciclos, 94ºC 40sec, 54ºC 40sec, 72ºC 1min; 72ºC 10 min |
|  | *rpL32* | F | CAGTTCCAAAAAAACGTACTTC |  |  |  |
| *rpl16* | *rpl16Fc* | F | CAGTCAAGATATGATATATTGTTC | (pers. comm. García-Fernández A.) | *S. ciliata* | 94ºC 4 min; 34 cycles (94ºC 1 min, 55ºC 1 min, 72ºC 2:30 min), 72ºC 7 min |
|  | *rpl16R* | R | CCCTTCATTCTTCCTCTATGTTG |  |  |  |
| *trnS-trnSfm* | *trnfm* | R | CATAACCTTGAGGTCACGGG | (Minder, Rothenbuehler &  Widmer, 2007) | *S. dioica* | Temp. Annealing 62 |
|  | *trnSUGA* | F | GAGAGAGAGGGATTCGAACC |  |  |  |
| *rps4* | *rps4R2* | F | CTGTNAGWCCRTAATGAAAACG | (Taberlet et al., 1991) | Complete genome | 94ºC 3 min; 35 cycles (94ºC 15 sec, 50ºC 30 sec, 72ºC 1min), 72ºC 7 min |
|  | *trnLb* | R | TCTACCGATTTCGCCATATC |  |  |  |

References

Cotrim HMC. 2001. Molecular systematics of *Silene* section *Siphonomorpha Otth* - a conservation perspective. *Ph.D. Thesis*, University of Lisbon

Hamilton MB. 1999. Four primer pairs for the amplification of chloroplast intergenic regions with intraspecific variation. *Molecular Ecology*, 8:521-3

Ingvarsson PK, Ribstein S, Taylor DR. 2003. Molecular evolution of insertions and deletion in the chloroplast genome of *Silene*. *Molecular Biology and Evolution*, 20:1737-1740

Ingvarsson PK, Taylor DR. 2002. Genealogical evidence for epidemics of selfish genes. *Proceedings of the National Academy of Sciences*, 99:11265-11269

López-Vinyallonga S, López-Pujol J, Martinell MC, Massó S, Blanché C. 2012. Genetic diversity in *Silene sennenii* Pau (Caryophyllaceae) assayed through DNA-based techniques. *Collectanea Botanica*, 31:7-18

Minder AM, Rothenbuehler C, Widmer A. 2007. Genetic structure of hybrid zones between *Silene latifolia* and *Silene dioica* (Caryophyllaceae): evidence for introgressive hybridization. *Molecular Ecology*, 16:2504-2516

Oxelman B, Lidén M, Berglund D. 1997. Chloroplast *rps16* intron phylogeny of the tribe *Sileneae* (Caryophyllaceae). *Plant Systematics and Evolution*, 206:393-410

Popp M, Erixon P, Eggens F., Oxelman B. 2005. Origin and evolution of a circumpolar polyploid species complex in *Silene* (Caryophyllaceae) inferred from low copy nuclear RNA polymerase introns, rDNA, and chloroplast DNA. *Systematic Botany*, 30:302-313

Sloan DB, Keller SR, Berardi AE, Sanderson BJ, Karpovich JF, Taylor DR. 2012. De novo transcriptome assembly and polymorphism detection in the flowering plant *Silene vulgaris* (Caryophyllaceae). *Molecular Ecology Resources*, 12:333-343

Sloan DB, Oxelman B, Rautenberg A, Taylor DR. 2009. Phylogenetic analysis of mitochondrial substitution rate variation in the angiosperm tribe *Sileneae*. *BMC Evolutionary Biology*, 9:260

Taberlet P, Gielly L, Pautou G, Bouvet J. 1991. Universal primers for amplification of three non-coding regions of chloroplast DNA. *Plant Molecular Biology*, 17:1105-1109