Apricot (Prunus armeniaca L.) is a member of the Rosaceae originated in Asia. Most of the European apricot cultivars have been traditionally considered self-compatible (SC). In the last years, an important renewal of plant material is taking place worldwide, with the introduction of new cultivars from different breeding programs. The use of self-incompatible (SI) parental genotypes has resulted in an increasing number of SI new cultivars with unknown pollination requirements. In order to establish the incompatibility relationships among apricot cultivars, in this work we perform an S-RNase allele identification in a group of cultivars from different breeding programs.

The S-alleles of each cultivar were determined by PCR amplification of the S-RNase gene by using the primers S-Rc-F/S-Rc-R that allow amplifying the first intron and identifying eight alleles. The primers Pru-C2/Pru-C4R were used to amplify the second intron of S-RNase in those alleles that showed similar size (S2 and S7; S6 and S9).

The alignment of the 421 bp fragment in the NCBI database showed a 99% identity with allele S9 (KF951503). Moreover, the primers Pru-C2/Pru-C4 showed a PCR-fragment of around 1400 bp for allele S9 and a 1386 bp for allele S3 strongly suggesting that S6 and S9 are the same allele.

The results allowed determining the S-genotype of 48 apricot cultivars.

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1 Cultivars in which S-RNase genotype reported herein differs from that reported in other studies.

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