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Molecular Characterization of the SCC8 Scar Marker and Evaluation of its Usefulness for Marker Assisted Selection in Seedless Vs. Seedless Crosses, in Grapes.

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The PCR-specific marker SCC8 is linked to a major locus involved in seedless and berry weight in grapevine, *sdl*. The codominant nature of the SCC8 marker allows a better evaluation of the genotype at the *sdl* locus and thus an estimation of its contribution to the phenotypic variation of seedlessness in a progeny. In order to establish tools for more efficient selection of the seedless character, we have evaluated the usefulness of the SCC8 marker in the distinction of seeded and seedless plants in a segregating progeny from a seedless vs. seedless cross. According to our results, in seedless plants, the distribution of the different alleles at the SCC8 locus is skewed towards the presence of

at least one SCC8+ allele whereas in the subset of seeded plants the distribution of the alleles is skewed in favor of the absence of the SCC8+ allele. Moreover we have cloned and determined the complete nucleotide sequence of two alleles of the SCC8 locus (the scc8- - wild type allele, and the SCC8+ - seedless type allele). Both alleles were 1011bp long and comparing their nucleotide sequences, 31 single nucleotide polymorphisms were detected, among them a single;T transition being responsible for the polymorphism previously described for the SCC8 locus alleles.

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