

Name: *ripening inhibitor (rin)*

Accessions: FR2

Gene ID: Solyc05g012020

Map position: chromosome 5 (short arm)

Gene function: MADS-box transcription factor, a ripening regulator.

Gene effect: The mutated allele with the deletion in both the end of *LeMADS-RIN* and the beginning of *LeMADS-MC* fails to trigger climacteric respiration and ripening-related ethylene biosynthesis (effect of mutated *rin*), besides to increase sepals size (effect of mutated *mc*)

Phenotypes: MT-*rin* fruit are green at maturity, later turning bright yellow, retarded ripening. Additionally, the associated *macrocalix* mutation (*mc*) display enlarged sepals and loss of inflorescence determinacy, forming shoots at the end of inflorescence.

Comments: This mutation is often used in the heterozygous form to create long shelf-life fruits. However, the mutation decreases lycopene content even in the heterozygous form.

Description of accessions available: MT-*rin* is a BC6Fn introgressed from LA1795

Figures:



MT-*rin* showing the characteristic big sepals.

Bibliography

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