

Name: *anthocyaninless (a)*

Accessions: Ant3

Gene ID:

Map position: chromosome 11 (long arm)

Gene function: probably a flavonoid 3'5'-hydroxylase

Gene effect: plants with the mutated allele fail to produce anthocyanin

Phenotypes: Stems and leaves always lack anthocyanin. The seeds also express some phenotype probably related to the lack of anthocyanin.

Comments:

Description of accessions available: MT-*a* is BC6Fn from LA1109

Figures:



anthocyaninless seeds (left) showing color change compared with Micro-Tom.

Bibliography

De Jong WS, Eannetta NT, De Jong DM, Bodis M (2004) Candidate gene analysis of anthocyanin pigmentation loci in the Solanaceae. *Theor Appl Genet* 108:423–432.

Downie AB, Dirk LMA, Xu Q, Drake J, Zhang D, Dutt M, Butterfield A, Geneve RR, Corum III JW, Lindstrom KG, Snyder JC (2004) A physical, enzymatic, and genetic characterization of perturbations in the seeds of the *brownseed* tomato mutants. *J. Exp. Bot.* 55: 961-973.

Olsen KM, Hehn A, Jugdé H, Slimestad R, Larbat R, Bourgaud F, Lillo C (2010) Identification and characterisation of CYP75A31, a new flavonoid 3'5'-hydroxylase, isolated from *Solanum lycopersicum*. *BMC Plant Biology* 2010, 10:21