

Name: *Anthocyanin fruit (Aft)*

Accessions: Ant2

Gene ID:

Map position: chromosome 10 (long arm)

Gene function: probably codes for an R2R3 MYB transcription factor

Gene effect:

Phenotypes: Anthocyanin in fruit epidermis

Comments: The *Aft* gene derives from *S. chilense*. Fruit anthocyanin expression is stronger in areas exposed to high light. Crosses with *hp1*, *hp2* and *atv* mutants also enhance *Aft* pigmentation. It is possible that *Aft* is a weak allele of *Aubergine (Abg)*.

Description of accessions available: MT-*Aft* is a BC6 introgressed from LA1996

Figures:



Double mutant *Aft/Aft hp2/hp2* showing expression of anthocyanin in fruit epidermis.

Bibliography:

Boches P, Myers J (2007) The Anthocyanin fruit tomato gene (*Aft*) is associated with a DNA polymorphism in a MYB transcription factor. *Hortscience* 42:856

Georgiev C (1972) Anthocyanin fruit (*Af*). *Tomato Genet. Coop. Rpt.* 22:10.

Gonzali S, Mazzucato A, Perata P (2009) Purple as a tomato: towards high anthocyanin tomatoes. *Trends in Plant Science* 14:237-241

Jones CM, Mes PB, Myers J (2003) Characterization and identification of the *Anthocyanin fruit (Aft)* tomato. *J. Hered.* 94:449–456

Peter J, Mes PB, James R, Myers J (2008) Characterization of tomatoes expressing anthocyanin in the fruit. *Amer. Soc. Hort. Sci.* 133:262–269.

Povero G, Gonzali S, Bassolino L, Mazzucato A, Perata P (2011) Transcriptional analysis in high-anthocyanin tomatoes reveals synergistic effect of *Aft* and *atv* genes. *J Plant Physiol* 168:270-279.

Sapir M, Oren-Shamir M, Ovadia R, Reuveni M, Evenor D, Tadmor Y, Nahon S, Shlomo H, Chen L, Meir A, Levin I (2008). Molecular aspects of *Anthocyanin fruit* tomato in relation to *high pigment-1*. *Journal of Heredity* 99:292-303.