Name: 35S::nahG

Accessions: H19

Map position:

Gene function: salicylic acid hydroxylase

**Gene effect**: transgenic plants have reduced levels of the hormone salicylic acid (SA) due to its degradation by the overexpressed enzyme.

**Phenotypes**: Old leaves present spontaneous necrotic lesions probably due to catechol (the product of SA degradation) accumulation. These plants are susceptive to most biotrophic pathogens. The plants are resistant to kanamycin, which is the selectable maker in the vector used.

## Comments:

**Description of accessions available**: MT-*nahG* is a BC6Fn. The first transgenic plants with this construct were produced in cv Moneymaker by Dr. Jonathan Jones.

**Figures:** 

## Bibliography

Audenaert K, De Meyer GB, Höfte MM (2002) Abscisic acid determines basal susceptibility of tomato to *Botrytis cinerea* and suppresses salicylic acid-dependent signaling mechanisms. Plant Physiol 128:491–501.

Brading PA, Hammond-Kosack KE, Parr A, Jones JDG (2000) Salicylic acid is not required for *Cf-2-* and *Cf-9-*dependent resistance of tomato to *Cladosporium fulvum*. Plant Journal 23:305–318.

Branch C, Hwang CF, Navarre DA, Williamson VM (2004) Salicylic acid is part of the *Mi*mediated defense response to root-knot nematode in tomato. Molecular Plant Microbe Interactions 17:351–356.

Thara VK, Tang X, Gu YQ, Martin GB, Zhou JM (1999) *Pseudomonas syringae pv tomato* induces the expression of tomato *EREBP-like* genes *Pti4* and *Pti5* independent of ethylene, salicylate and jasmonate. Plant Journal 20:475–483

Yan Z, Reddy MS, Ryu CM, McInroy JA, Wilson M, Kloepper JW (2002) Induced systemic protection against tomato late blight elicited by plant growth-promoting rhizobacteria. Phytopathology 92:1329–1333.