

Name: *ARR5::GUS*

Accessions: H5

Map position:

Gene function: Arabidopsis cytokinin-responsive promoter fused to the reporter gene GUS (beta-glucuronidase).

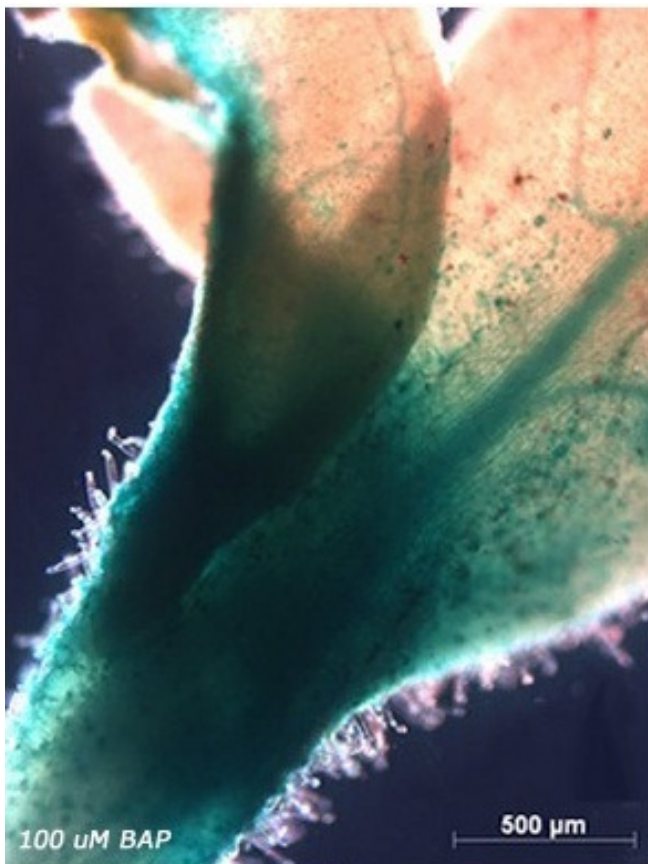
Gene effect: MT-*ARR5::GUS* plants present gus activity in sites where endogenous cytokinin accumulates and in response to exogenous cytokinin.

Phenotypes: only visible upon histochemical gus assay, which consists in the treatment of transgenic plants with the substrate 5-bromo-4-chloro-3-indolyl glucuronide (X-Gluc): the product of the reaction is insoluble and has a clear blue color. Other common substrates are p-nitrophenyl β -D-glucuronide for the spectrophotometrical assay and 4-methylumbelliferyl-beta-D-glucuronide (MUG) for the fluorimetrical assay. The plants are resistant to kanamycin, which is the selectable maker in the vector used.

Comments:

Description of accessions available: MT-*ARR5::GUS* is a transgenic plant produced from the construct donated by Dr. JJ Kieber.

Figures:



MT-ARR5::*GUS* seedling showing a GUS staining in the shoot tip. Note the staining of vascular tissues and the non-staining of trichomes.

Bibliography

D'Agostino IB, Deruère J, Kieber JJ (2000) Characterization of the response of the Arabidopsis response regulator gene family to cytokinin. *Plant Physiology* 124:1706–1717