

Title (en)

ISOLATION AND CHARACTERIZATION OF PLANT REGULATORY SEQUENCES

Title (de)

ISOLATION UND CHARAKTERISIERUNG VON REGULATORISCHEN SEQUENZEN AUS PFANZEN

Title (fr)

ISOLATION ET CARACTERISATION DE SEQUENCES REGULATRICES DE PLANTES

Publication

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Application

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Abstract (en)

[origin: WO9928483A2] In the search for plant regulatory sequences capable of driving nematode-triggered effector gene expression in feeding structures the promoter tagging appears to be a valuable tool. A large collection of transgenic Arabidopsis thaliana(L.) plants was generated. They were transformed with a beta -glucuronidase gene functioning as a promoter tag. Two T-DNA constructs, pGV1047 and p DELTA gusBin19 were used. Early responses to nematode invasion were of primary interest. Four lines exhibiting GUS activity in syncytia induced by the beet cyst nematode were studied. Reporter gene activation was also identified in galls induced by root knot and ectoparasitic nematodes. Time course studies revealed that the four tags were differentially activated during the development of the feeding structure. T-DNA-flanking regions responsible for the observed responses after nematode infection were isolated and characterized for promoter activity.

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