

Isolation and Characterization of a Nematode Resistance Gene from Soybean (*Glycine max*)

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In the course of the study the molecular mechanism of the hypocotyl elongation during growing soybean seedlings in the dark condition, we have generated a number of expressed sequence tags (ESTs) from a cDNA library prepared from the long hypocotyls of soybean seedlings. Comparisons of the ESTs with NCBI BLAST-X program assigned a cDNA clone as a putative nematode resistance gene homologue. The complete nucleotide sequence of this cDNA was determined by the automatic DNA sequencer ABI 377, using a series of oligonucleotide primers. The cDNA contains an open reading frame with 1368 nucleotides and 456 amino acids.

To study the biochemical nature of this putative nematode resistance gene product, this cDNA was cloned in pET vector (Novagen) and pGEX vector (Amersham Pharmacia) and expressed in *E. coli*. A 52 Kda band was detected in pET expression system after Ni²⁺ column purification.