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Characterization of a species-specific satellite DNA in *Angelica acutilobum*

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Objectives

A. acutilobum is a medicinal plant cultivated in Korea and Japan. This study was conducted to develop species-specific marker in this species.

Materials and Methods

1. Material:

Plant - *Angelica acutilobum* Kitagawa (Ill Dang Gui).

2. Methods:

A species-specific satellite DNA (pA170 repeats) were cloned and characterized. FISH technique was applied to localize this sequence on the chromosomes.

Results and Discussion

Relationships among genomes are often revealed by the occurrence of common or related satellite DNA types. 'Restriction satellite' DNA comprises highly repetitive, tandemly arranged genome components present in higher organisms. These DNA elements are mainly concentrated at telomeric and centromeric regions, however, they were also located in other chromosomal regions as intercalary block. The pA170 satellite DNA family was found to be species-specific for *Angelica acutilobum*. It consists of slightly AT-rich tandemly arranged repeats with a high copy number in the genome and shows a high level of intra-specific sequence similarity. pA170 repeats were not detected in the genomes of closely related species such as *A. gigas* and *A. sinensis*.

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