Screening of recombinant plants between CAPS marker A and B.
Mapping by using the PCR markers

CAPS. 1

-Ú•W^â“Žq

CAPS. 2

A

B

H  A  A  H  H  H  H  H  B  A

H  A  A  H  H  H  H  H  H  A

A

B
Large-scale mapping of $d1$ gene
Screening of genomic libraries

**A  Colony hybridization**

@ YAC library (about 7,000 Clones)

High density colony filters

1500 clones

Colony hybridization with DNA markers

Southern hybridization of candidate YAC clones with the DNA markers

**B  3-step PCR screening**

@@@ YAC library (about 8,000 Clones, 80 plates)

1stPCR (W-superpools)

2nd PCR (x,y,z-subpools)

3rd PCR (singleYAC)
YAC clone contig of \textit{d1} region
the number of recombinant plants in 3185 d1 segregants
Genomic Southern hybridization in 9 d1 mutants

S5933

M

Nipponbare

Kasalath

FL2

HO532

HO533

HO537

HO538

HO541

HO552

CM392

CM1792

M

9 d1 mutants

(kb)

10.4

9.6

6.8

6.2

5.2
Northern analysis in $d1$ mutants

S5933

S14002 (actin)
Complementation test

A d1 B

Genomic clones from wild type (Nipponbare)

Transformation

d1 mutant callus (HO541)

Control Transformant
PCR analysis of transformants

Transformants

Vector  Cosmid

1  2  3  4  1  2  3  4

M  W  d1  C  1  2  3  4  1  2  3  4  M

Dwarf  Normal  Phenotypes
Signal transduction model of gibberellin

GA-Receptor

G-Protein (trimer)

GA signal

2nd signal

3rd signal