

Genotyping Arabidopsis Insertional Mutants

Seeds from thousands of lines have been cataloged with inserts available in/near most genes available.

Large Disruptive TDNA Insert*

The mutant collection is available online by searching for your gene of interest.



A TDNA is a ~5kb piece of DNA derived from a plasmid that gets inserted randomly into the plant genome during Agrobacterium infection.

The insert can be located anywhere relative to your gene of interest.

Large Disruptive TDNA Insert*



Forward Gene Primer

TDNA Primer**

Reverse Gene Primer

*TDNA not shown to scale

**Half of mutants have the TDNA inserted in the other orientation, and you would use the TDNA primer along with the Reverse Gene primer for the "TDNA Rxn"

"TDNA PCR Reaction"

1 Gene Primer, & 1 TDNA Primer

Only plants with at least 1 copy of the TDNA insert will give a band

~400bp Product

"WT PCR Reaction"

2 Gene-Specific Primers

Only WT copies of the gene give a band because the TDNA makes the amplicon too big to work for this PCR

~400bp Product

DNA samples taken from individual plants. PCR performed, and results run on electrophoresis gels.

