

## *Tg(UAS:Dronpa)rk5*

### Transgene description

The *Tg(UAS:Dronpa)rk5* transgene contains the *Dronpa* cDNA under control of the UAS promoter. The *Dronpa* cDNA encodes a protein that is a genetically engineered version of green fluorescent protein cloned from *Pectiniidae*. The fluorescence of the *Dronpa* protein can be switched on and off by using two different wavelengths of light. (Aramaki and Hatta, Dev. Dynamics 235:2192-2199, 2006).

### Genotyping assay

To genotype the *Tg(UAS:Dronpa)rk5* line, the transgene-specific primers (**DRA\_03** and **DRA\_04**) are used.

#### **Primers:**

**DRA\_03:** 5' TCA AAG AAG GCG GAC CTC TG 3'

**DRA\_04:** 5' GAC CAT TGG CAG GAA AGT TCA C 3'

#### **PCR program (60\_30\_30):**

- 1\_94°C for 3 min
- 2\_94°C for 30 s
- 3\_60°C for 30 s
- 4\_72°C for 30 s
- 5\_Go to step 2 (above) for 34 cycles
- 6\_72°C for 5 min
- 7\_8.0°C hold
- 8\_END

#### **Product size: 258 bp**

The 258 bp product is specific for the genomic DNA containing the *Tg(UAS:Dronpa)rk5* transgene. No PCR product is generated for wild-type genomic DNA.

**IMPORTANT NOTE:** It is possible that multiple copies of the transgene might have integrated into the genome during transgenesis and that some of these integrations are non-functional. Samples that contain only a non-functional transgene or its fragment will be identified falsely as positive in the genotyping assay. For this reason, it is recommended to use functional assays to verify individuals identified as positive in the genotyping assay.