

Tg(UAS:Kaede)rk8

Transgene description

The *Tg(UAS:Kaede)rk8* transgene contains the Kaede cDNA under control of the UAS promoter. The Kaede cDNA encodes a fluorescent protein from the stony coral *Trachyphyllia geoffroyi* that emits bright green fluorescence after synthesis, but changes efficiently to a bright and stable red fluorescence on irradiation with UV or violet light (Hatta K. et al, Nat. Prot. 1(2):960-967, 2006).

Genotyping assay

To genotype the *Tg(UAS:Kaede)rk8* line, the transgene-specific primers (**KAA_01** and **KAA_02**) are used.

Primers:

KAA_01: 5' GGA AAA CAG AGT ATG GAC CTT GTA G 3'

KAA_02: 5' TTG TAG TCT TTG TCA TGC CTC AAT A 3'

PCR program (58_40_40):

- 1_94°C for 3 min
- 2_94°C for 30 s
- 3_58°C for 40 s
- 4_72°C for 40 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: 512 bp

The 512 bp product is specific for the genomic DNA containing the *Tg(UAS:Kaede)rk8* 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.

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