chrna1^{b107}

Nature of the mutation

The *b107* mutation contains a deletion of approximately 1.5 kb in the *chrna1* gene (Sepich et al., Genetics 148: 361-372, 1998).

Genotyping assay

Genotyping of the *b107* allele is based on a PCR assay in which deletion-flanking primers are used. A short PCR amplification product is detected for a DNA template containing the deletion. The PCR product for WT template is larger and will typically not be generated in PCR reactions in which a short elongation time is set for the Taq DNA polymerase.

Primers:
ACA01: 5' CGA GTG GGT GAT GAA GGA CTA CAG 3'
ACA02: 5' TCA GAG AGA GCA GGA CAG AGA TGC 3'

PCR program (56_30_30):

1. 94°C for 3 min
2. 94°C for 30 sec
3. **56**°C for **30** sec
4. 72°C for **30** sec
5. Go to step 2 (above) for 34 cycles
6. 72°C for 5 min
7. 8.0°C hold
8. END

Product size: 349 bp

The 349 bp product is generated for the DNA template containing the *b107* mutation. No PCR product is detected for WT samples due to the insufficient elongation time set for the Taq DNA polymerase to synthesize this product (see step 4 in the PCR program).

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