**Supplemental Table 2**. Primers, amplicon size, and amplification conditions used for PCR genotyping and CRE mRNA expression.

|  |  |  |
| --- | --- | --- |
| gene target | primer sequence (5’-3’) | amplicon size (bp) |
| TPO-CRE-ER transgene | F: GTTTATAAGGTGGGTAACCAAG  R: TTTTCGGATCCGCCGCATAAC | 428 |
|  |  |  |
| BRAFV600E knock-in | F: TGAGTATTTTTGTGGCAACTGC  R: CTCTGCTGGGAAAGCGGC | 307 (mutant)  185 (wild type) |
|  |  |  |
| CRE transgene | F: GAACCTGATGGACATGTTCAG  R: GCACGTCCGGCATCAAC | 317 |

*Amplification conditions for the TPO-CRE-ER transgenic mice:*

Initial Denaturation: 1 cycle of 95 ºC for 3 minutes

Amplification: 34 cycles of:

95 ºC for 15 seconds

55 ºC for 15 seconds

72 ºC for 30 seconds

Final Extension: 1 cycle of 72 ºC for 3 minutes

*Amplification conditions for the BRAFV600E knock-in mice*

Initial Denaturation: 1 cycle of 95 ºC for 3 minutes

Amplification: 34 cycles of:

95 ºC for 30 seconds

60 ºC for 30 seconds

72 ºC for 45 seconds

Final Extension: 1 cycle of 72 ºC for 3 minutes

*Amplification conditions to detect the expression of CRE mRNA:*

Reverse transcription: First strand cDNA synthesis

DNase I: 1 ul at 37 ºC for 10 minutes

`1. RNA denaturation: 65 ºC for 5 minutes

3. Reverse transcription phase

4. Reverse transcriptase inhibitor (Superscript III): 0.5 µl at 50ºC for 60 minutes

5. Inactivation: 85 ºC for 5 minutes

*PCR conditions:*

Initial Denaturation: 1 cycle of 95 ºC for 3 minutes

Amplification: 34 cycles of:

95 ºC for 30 seconds

55 ºC for 15 seconds

72 ºC for 30 seconds

Final Extension: 1 cycle of 72 ºC for 3 minutes