

Table S3. PCR-RFLP and fragment analysis protocols used for the genotyping of markers at the *MC1R* and *NR6A1* genes.

Primer pair names/genes	Genotyping method	Primer sequences (5'-3'): Forward and Reverse primers	Amplified region (bp)	PCR conditions ¹	Genotyping protocols/system
<i>MC1R_1</i>	PCR-RFLP	CTGCACTCGCCCATGTACTA AGCAGAGGCTGGACACCAT	196	61/3.0	Amplicons digested with <i>BspHI</i> (c.367G = 196 bp in <i>E</i> ⁺ , <i>E</i> ^{D1} and <i>e</i> ; c.367A = 154 + 42 bp in <i>E</i> ^{D2} and <i>E</i> ^P) ²
<i>MC1R_2</i>	PCR-RFLP	GCGGGTACTGTACGTCCACAT CCCAGCAGAGGAGGAAGAC	154	61/3.0	Amplicons digested with <i>HhaI</i> (c.727G = 108 + 46 bp in <i>E</i> ⁺ , <i>E</i> ^{D1} , <i>E</i> ^{D2} and <i>E</i> ^P ; c.727A = 154 bp in <i>e</i>); Amplicons digested with <i>BstUI</i> (c.729G = 109 + 47 bp in <i>E</i> ⁺ , <i>E</i> ^{D2} and <i>E</i> ^P ; c.729A = 154 bp in <i>E</i> ^{D1} and <i>e</i>) ²
<i>MC1R_indel</i>	Fragment analysis	CACCTCTGGGAGCCATGA GTCTGGTTGGTCTGGTTG	168/170	55/2.5	Amplicons analysed in a capillary sequencer (ABI3100 Avant, ABI Prism)
<i>MC1R_OA</i>	OpenArray™ Genotyping platform	-	-	-	QuantStudio™ 12 K Flex Real-Time PCR System (Thermo Fisher Scientific) ³
<i>NR6A1</i>	PCR-RFLP	GGTATCCTGAGCACCCAGTC ACCTGGAGGACAGTGTGGAG	203	55/2.5	Amplicons digested with <i>MspI</i> (g.299084751C = 180 + 23 bp; g.299084751T = 203 bp) ²
<i>NR6A1_OA</i>	OpenArray™ Genotyping platform	-	-	-	QuantStudio™ 12 K Flex Real-Time PCR System (Thermo Fisher Scientific) ³

¹ Annealing temperature (°C) / [MgCl₂] mM.

² Genotyping protocols were based on PCR-RFLP. Restriction enzymes used to genotype the amplified fragments are indicated together with the size of the fragments obtained after digestions and extension alleles that have the indicated PCR-RFLP patterns (Fontanesi et al. 2010, 2014).

³ Genotyping details are reported in Muñoz *et al.* (submitted).