Genotyping protocol

Laptm4a

IR00003010 / E184

(ICS internal reference)

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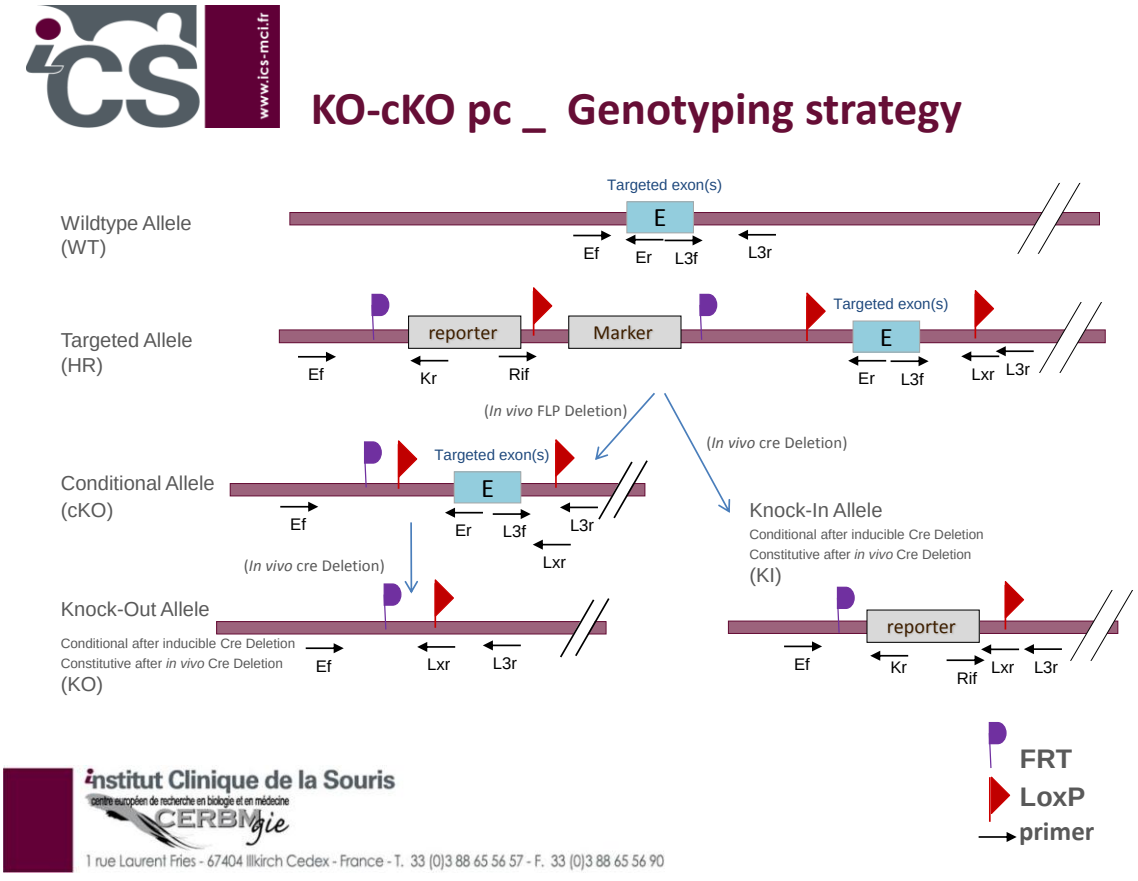
1. Genotyping protocol and data

This section describes the condition used at the Mouse Clinical Institute (ICS) to genotype your **Laptm4a** Constitutive Knockout / Conditional Knockout (KO-cKO x Cre) project.

1.1. Genotyping strategy

The map below describes the position of the primers used for genotyping for each possible allele.



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Sequence of primers used for genotyping:

Position	Primers	Sequence
Ef	5415	TTATCTTTGGAATTGTGAGCCAGCTTG
Ef[2]	5416	CTTACACAAAGGGGAAATCAGAGGGG
Er	5417	GCCAATAAACCAGAATGAAATGCAGAG
Kr	3209	CCAACAGCTTCCCCACAACGG
L3f	5418	GAGGGTATGGGGGACTTTTGGGA
L3f[2]	5420	GTATGGGGGACTTTTGGGATAGCATT
L3r	5419	GACCCTGGCTATACATCACAGAAGGC
Lxr	3255	ACTGATGGCGAGCTCAGACCATAAC
Rif	5966	GCACATGGCTGAATATCGACGGT

[2]: for a selected position, a second primer was designed

PCR fragments expected size (bp):

PCR	Region analyzed	Primers used	Position on the primer *(see the map above)*	Targeted allele (HR)	conditional allele (cKO)	KI allele	WildType allele
A	5' part of the selection marker	5415-3209	Ef / Kr	393	---	393	---
B	Presence of the distal loxP	5418-5419	L3f / L3r	451	451	---	391
C	Distal loxP specific PCR	5420-3255	L3f2 / Lxr	196	196	---	---
D	Excision of the selection marker	5416-5417	Ef2 / Er	7514*	558**	---	351
E	Cre total excision	5966-3255	Rif / Lxr	3305*	---	471	---

*: this PCR product will not be observed using our PCR genotyping conditions (see description below)
---: no Amplicon should be obtained

1.2. PCR protocol

This section describes the composition of the mix and cycling conditions used for genotyping.

Reagents:	Volume:
- FastStart PCR Master (Roche)	7.5µl
- DNA (50ng/µl)	1.5µl
- 5' primer (100 µM)	0.06µl
- 3' primer (100 µM)	0.06µl
- Sterile H_2O	up to 15 µl

Cycling conditions:

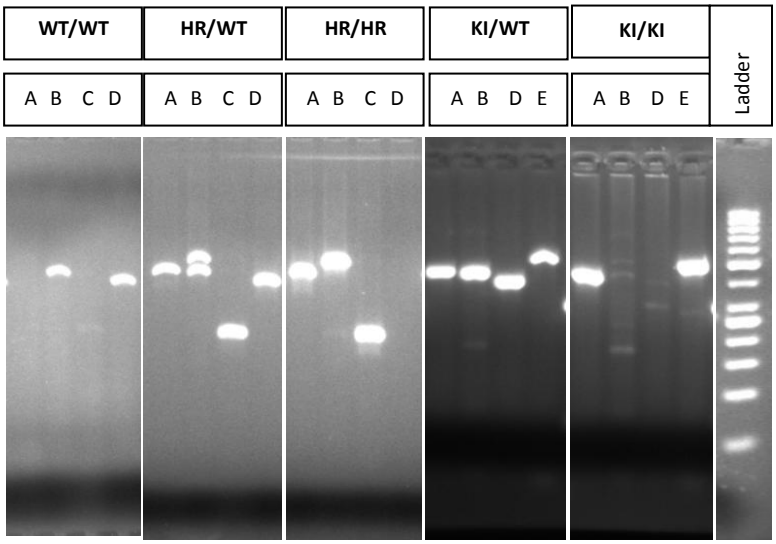
Temp	Time	#Cycles
95°C	4min	1
94°C	30s	
62°C	30s	34
72°C	1min	
72°C	7min	1
20°C	5min	1

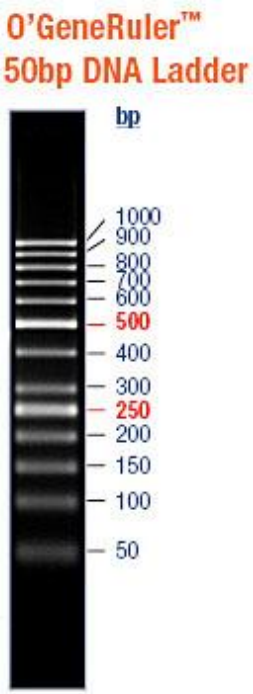
NB: These PCR conditions have been optimized for high-throughput genotyping. Adaptation to small-scale may be required.

1.3. Picture of genotyping with various alleles

Analysis of PCR products pattern was done by gel electrophoresis 2% agarose (SB buffer).

Representative genotyping picture:





2. Cre and Flp genotyping method

You will find the genotyping protocol in the publication:

Highly-efficient, fluorescent, locus directed cre and FlpO deleter mice on a pure C57BL/6N genetic background.
Birling MC, Dierich A, Jacquot S, Hérault Y, Pavlovic G.
Genesis. 2012 Jun;50(6):482-9. doi: 10.1002/dvg.20826. Epub 2012 Mar 20.