

B6(Cg)-Foxn1^{tm3(cre)}Nrm/J

品系编号：GAP1063

品系简称：Foxn1-cre

品系特点：

Foxn1-cre 是在内源基因 Foxn1 的尾端插入 Cre 重组酶，Foxn1 编码序列未受到破坏。当与含有 loxP 位点的小鼠杂交时，Cre 介导的重组可以实现胸腺上皮细胞和角质形成细胞组织特异性敲除。

遗传学信息：

遗传背景：C57BL/6J

品系类型：Targeted

相关基因：Foxn1-cre

饲养信息：

配繁策略：

Homozygote x Homozygote

配繁特性：

该小鼠可以纯合子保种。

基因型鉴定方案：

1) 鉴定引物：

Primer	Sequence 5' → 3'	Primer Type	Note
15344	CCT ATG CCA CTC AGC CAA CT	Wild type Forward	B
15345	GGA GGG GTG ATC TTT GAC CT	Wild type Reverse	B
oIMR1084	GCG GTC TGG CAG TAA	Mutant Forward	A Cre F

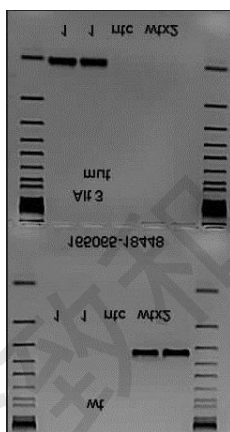
	AAA CTA TC		
oIMR1085	GTG AAA CAG CAT TGC TGT CAC TT	Mutant Reverse	A Cre R

2) PCR 反应体系及扩增程序:

Reaction A		Cycling	
COMPONENT	FINAL CONCENTRATION	STEP	TEMP °C TIME NOTE
ddH ₂ O		1	94.0 --
Kapa 2G HS buffer	1.30 X	2	94.0 --
MgCl ₂	2.60 mM	3	65.0 -- -0.5 C per cycle decrease
dNTPS-kapa	0.26 mM	4	68.0 --
oIMR1084	0.50 uM	5	-- repeat steps 2-4 for 10 cycles (Touchdown)
oIMR1085	0.50 uM	6	94.0 --
Glycerol	6.50 %	7	60.0 --
Dye	1.00 X	8	72.0 --
Kapa 2G HS taq polym	0.03 U/ul	9	-- repeat steps 6-8 for 28 cycles
DNA		10	72.0 --
		11	10.0 -- hold

Reaction B		Cycling	
COMPONENT	FINAL CONCENTRATION	STEP	TEMP °C TIME NOTE
ddH ₂ O		1	94.0 --
Kapa 2G HS buffer	1.30 X	2	94.0 --
MgCl ₂	2.60 mM	3	65.0 -- -0.5 C per cycle decrease
dNTPS-kapa	0.26 mM	4	68.0 --
15344	0.50 uM	5	-- repeat steps 2-4 for 10 cycles (Touchdown)
15345	0.50 uM	6	94.0 --
Glycerol	6.50 %	7	60.0 --
Dye	1.00 X	8	72.0 --
Kapa 2G HS taq polym	0.03 U/ul	9	-- repeat steps 6-8 for 28 cycles
DNA		10	72.0 --
		11	10.0 -- hold

3) 预期结果: 使用 3%琼脂糖凝胶电泳以分辨条带



Mutant = 100 bp Heterozygote = 100 bp and 324 bp

Wild type = 324 bp

具体可参考: <https://www.jax.org/strain/018448>

应用领域:

- 1、胸腺上皮细胞和角质形成细胞组织特异敲除

参考文献：

- 1、2007 Specific expression of lacZ and cre recombinase in fetal thymic epithelial cells by multiplex gene targeting at the Foxn1 locus. Gordon J , et al. BMC Dev Biol 7:69