

Prss37-KO

品系全名	B6;129S- <i>Prss37</i> ^{tm1Smoc}
目录号	NM-KO-00016
品系状态	胚胎冻存

基因信息

基因名 Prss37	基因曾用名	Tryx2, 1700016G05Rik
	NCBI ID	67690
	MGI ID	1914940
	Ensembl ID	ENSMUSG00000029909
	人类同源基因	PRSS37

品系描述

构建Prss37基因敲除小鼠模型，基因敲除纯合子小鼠表现为雄性不育。

应用领域：生殖系统

*使用本品系发表的文献需注明: Prss37-KO mice (Cat. NO. NM-KO-00016) were purchased from Shanghai Model Organisms Center, Inc..

验证数据

TABLE 1. Targeted disruption of *Prss37* leads to male infertility in mice.

Male mice	Females	Plugs	Litters	Offspring (M/F)*	FCP (%) [†]	FC (%) [‡]
wt (n = 5)	79	29	24	145 (79/66)	36.7	82.8
<i>Prss37</i> ^{+/−} (n = 5)	82	32	19	137 (80/57)	39.0	59.4
<i>Prss37</i> ^{−/−} (n = 12)	182	62	0	0	34.1	0

* M, male; F, female.

[†] Frequency of copulatory plug (FCP) was calculated as the ratio of the number of plugged females to total number of females to which males with the same genotype had accessed.

[‡] Frequency of conception (FC) was calculated as the ratio of the number of females that gave birth to offspring to the number of females with successful mating.

具有以下表型：

- Prss37 KO不育症小鼠精子发生、精子的形态和运动均正常，并且A23187诱导的精子顶体反应和顶体酶活性也与野生型小鼠相当。
- Prss37 KO不育症小鼠体内受精率严重下降，精子从子宫进入输卵管的迁移能力存在缺陷。

- Prss37 KO不育症小鼠精子无法穿过透明带与卵子结合。
- Prss37 KO不育症小鼠中成熟Adam3缺失。

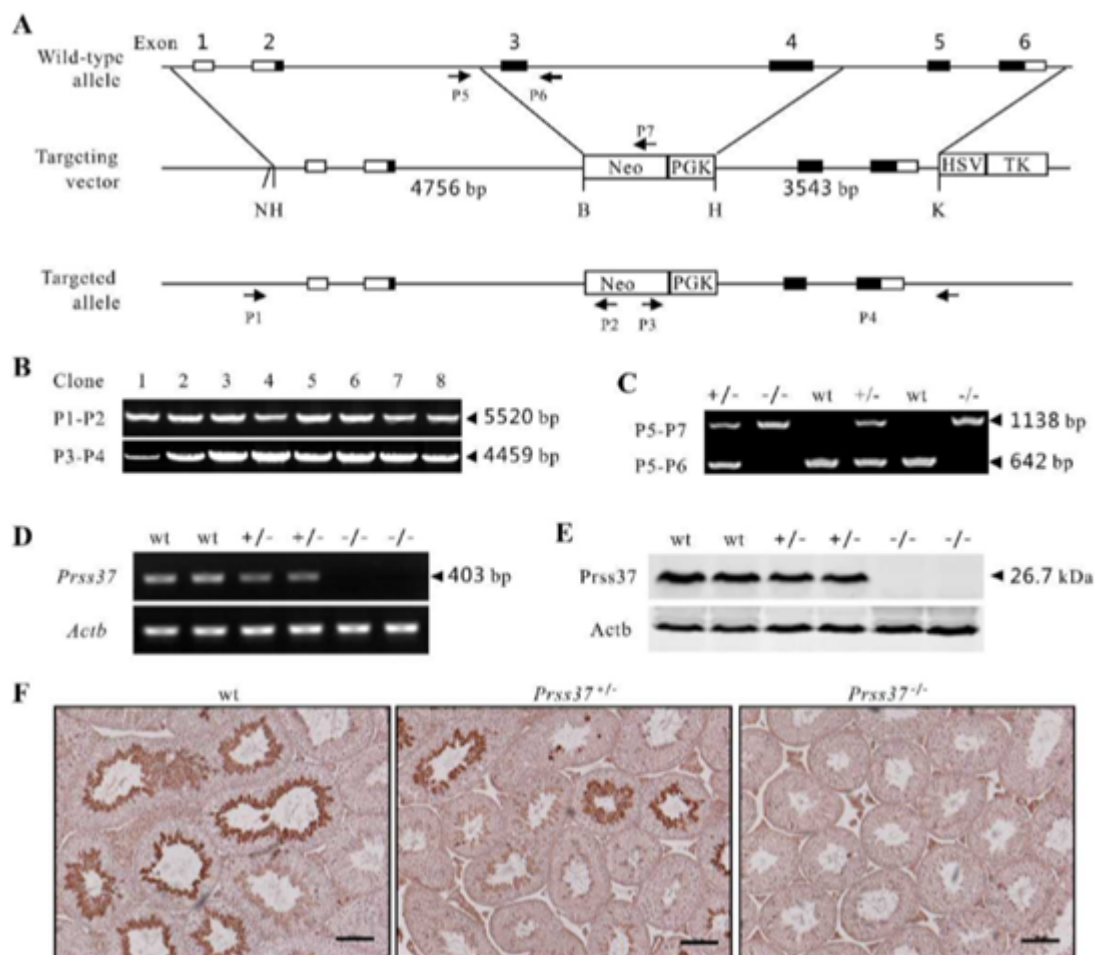


Fig1. Prss37基因敲除小鼠构建策略及表达验证

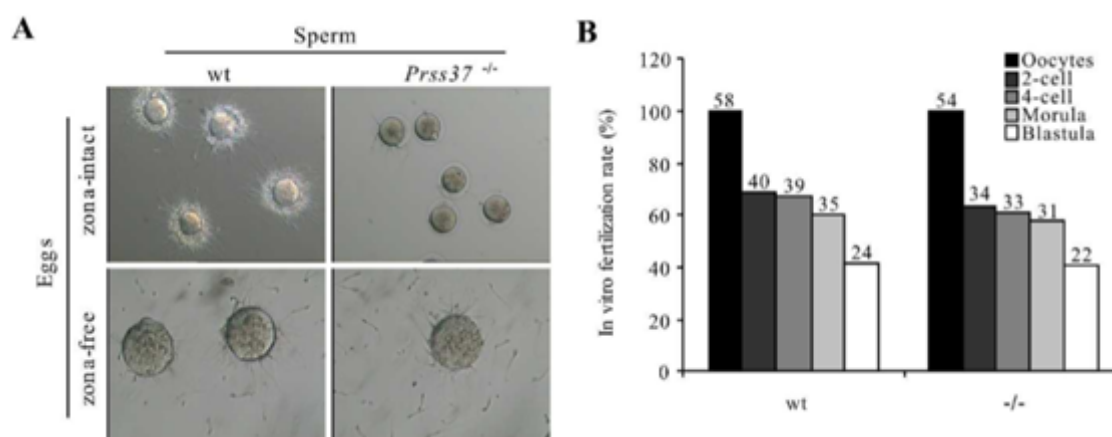


Fig2. Prss37基因敲除小鼠精子无法穿过透明带与卵子结合

Reference

Shen C, Kuang Y, Liu J, et al. Prss37 is required for male fertility in the mouse. Biol Reprod. 2013 May 16;88(5):123.