

研究报告

西部地区主要猪种和野猪H-FABP基因分子标记

庞卫军, 孙世铎, 李 影, 陈国柱, 杨公社

西北农林科技大学动物科技学院, 杨陵 712100

收稿日期 2004-4-7 修回日期 2004-9-23 网络版发布日期 接受日期

摘要 利用PCR-RFLP(Hinf I、Hae III和Msp I 3种限制性内切酶)分子标记技术,检测了杜洛克猪、长白猪、大白猪、内江猪、荣昌猪、汉江黑猪、汉中白猪、八眉猪和野猪共计265头猪H-FABP基因5' -上游区和第二内含子区的遗传变异,并利用最小二乘模型分析了H-FABP基因对猪肌肉脂肪含量的遗传效应。结果表明:(1)在Hinf I-RFLP位点上,上述品种和野猪均存在多态性,其中大白猪、八眉猪、汉江黑猪、汉中白猪和野猪表现为低度多态,杜洛克、长白猪、内江猪和荣昌猪为中度多态;除汉江黑猪(P<0.05)和野猪(P<0.01)外,其他猪种基因频率和基因型频率都处于Hardy-Weinberg平衡状态(P>0.05);而在Hae III-RFLP和Msp I-RFLP位点上,仅内江猪、荣昌猪、汉江黑猪和八眉猪为单态;(2)9种基因型对肌肉脂肪(IMF)含量的影响,HH>Hh>hh, DD

关键词 [心脏脂肪酸结合蛋白基因; 肌肉脂肪含量; 分子标记; 遗传效应](#)

分类号 [S828](#)

Relationship between Molecular Marker of Western Main Pig H-FABP Gene and IMF Content

PANG Wei-Jun,SUN Shi-Duo,LI Ying,CHEN Guo-Zhu,YANG Gong-She

College of Animal Science ,Northwest Sci-Tech University of Agriculture and Forestry

Abstract

By using 265 pigs from eight breeds including Duroc, Landrace, Large White, Neijiang, Rongchang, Hanjiang Black, Hanzhong White, Bamei and wild ones, the genetic variations of 5' -upstream region from and the second intron in porcine H-FABP gene were checked by PCR-RFLP molecular marker with HinfI、Hae III and MspI, and effect of H-FABP gene on IMF content was then analyzed by least square analysis. The results showed as follows: (1) 8 pig breeds and wild pig had polymorphism at Hinf I-RFLP site. In above detected breeds, large white, Bamei pig, Hanjiang Black, Hanzhong White pig breeds and wild pig presented low polymorphism while other breeds have mediate polymorphism; (2) Among the tested breeds only 4 Chinese local pig breeds had no polymorphism at the Hae III-RFLP and Msp I-RFLP sites, but Duroc, Landrace, Large white, Hanzhong White pig breeds and wild pig had polymorphism. Wild pig at the Hae III-RFLP, Landrace, Large white and wild pig at the Hae III-RFLP and Msp I-RFLP sites were low polymorphism, others were mediate polymorphism; (3) H-FABP gene increased IMF content significantly(P<0.05). Genetic effect of H-FABP gene on IMF content were HH>Hh>hh, DD<Dd<dd, AA<Aa<aa and genetic effect values were 3.89, 3.42, 3.17, 2.27, 2.49, 2.91, 2.28, 2.70, 2.95 respectively. The results suggest that porcine meat quality may be improved by increased genotype aa-dd-HH frequency in porcine group

Key words [H-FABP gene](#); [IMF content](#); [Molecular marker](#); [Genetic](#)

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(OKB\)](#)
- ▶ [\[HTML全文\]\(OKB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含 “心脏脂肪酸结合蛋白基因; 肌肉脂肪含量; 分子标记; 遗传效应” 的相关文章](#)
- ▶ 本文作者相关文章

- [庞卫军](#)
- [孙世铎](#)
- [李 影](#)
- [陈国柱](#)
- [杨公社](#)

[effect](#)

DOI:

通讯作者 杨公社 gongshe-yang@163.com