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研究报告

# MyoG基因的遗传效应分析

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摘要 实验采用PCR-RFLP技术分析了不同品种猪MyoG基因3′端MspⅠ位点的多态性，应用单标记回归模型分析了不同基因型与相关性状间的关联性及不同等位基因的遗传效应。结果表明：N等位基因能极显著地增加胴体瘦肉率和眼肌面积，降低皮脂含量（P<0.01），改善胴体产肉量和提高胴体品质；同时，不同基因型对肉质性状的遗传影响作用较大，表现为N等位基因能极显著地降低猪肉品质，使pH值、肉色和肌内脂肪含量降低，并使肌肉的系水力变差（P<0.01）。N等位基因对增加胴体瘦肉率的加性效应值和显性效应值分别为3.929%和-0.602%；对增加眼肌面积的加性效应值和显性效应值分别为2.0985 cm2和-0.5775 cm2；对皮脂率的加性效应值为-3.0245%，显性效应值为-0.4045%。N等位基因对pH1的加性效应值和显性效应值分别为-0.167和0.034；对贮藏损失的加性效应值和显性效应值分别为0.558和-0.347；对肌内脂肪含量的加性效应值和显性效应值分别为-0.963和-0.217。但MyoG基因3′端MspⅠ位点的突变对FOM肉脂仪测定的胴体等级性状的影响不显著（P>0.05）。

关键词 猪；MyoG基因；遗传效应；PCR-RFLP

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## The Genetic Effects of MyoG Gene

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**Abstract**

The PCR-RFLP technique was applied in this study to analyze the MspI polymorphism in the 3-UTR of MyoG gene. The relationship between different genotypes and corresponding traits and the genetic effects of different allele were analyzed. The results indicated that the N allele has highly significant genetic effects in improving carcass lean percent and the loin eye area, and decreasing the fat content (P<0.01). But no significant influence was found to the FOM carcass traits (P>0.05). As meat quality traits being considered, the N allele highly significantly decreased the pH value, meat color, intramuscular fat content, increased the drip loss (P<0.01) and caused the worse of meat quality. When considering genetic values of different traits, it was found that the N allele had additive effects of 3.929% to carcass lean percent, 2.0985 cm2 to loin eye area, -3.0245% to the fat content, -0.167 to the pH1 value, 0.558% to the drip loss and -0.963% to intramuscular fat content. But no effect was observed to the carcass grading traits.

**Key words** pig MyoG gene genetic effect PCR-RFLP

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