

畜牧—研究报告

猪HNF-4a基因多态性与肌纤维组织学特性及生长性状的相关性分析

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摘要:

肝细胞核因子-4a (HNF-4a) 是肝细胞核因子 (hepatocyte nuclearfactor, HNF) 家族成员之一, 可在肝脏内高表达, 该家族基因对肝细胞的分化调控起关键作用, 同时参与肝脏糖、脂代谢相关基因特异性表达的调控。HNF-4a基因参与调节生命代谢活动的诸多方面并且对动物生长发育过程起着重要作用。本研究采用PCR-SSCP的方法分析HNF-4a基因单核苷酸多态性与生长性状的相关性。结果发现SH1多态位点的BB基因型对法系长白猪个体的出生体长的效应值最大。SH2多态位点的AB基因型对法系长白猪个体的初生重的效应值最大。同时, 该位点与大民猪肌纤维组织学特性也存在显著相关。AB型个体的肌纤维直径和肌纤维横截面积显著低于AA和BB型 (P<0.05)。

关键词: 猪; 肝细胞核因子-4a; PCR-SSCP; 肌纤维

Studies on Polymorphisms of HNF-4a Gene and their Relarionships with Muscle Fiber and Growth Traits of Pigs

Abstract:

Hepatocyte nuclear factor-4a (HNF-4a) is a member of the hepatocyte nuclear factor family, can be highly expressed in the liver, The family of genes regulating the differentiation of liver cells play a key role, while involved in liver glucose and lipid metabolism in the regulation of specific gene expression. HNF-4a gene involved in regulating many aspects of life and metabolic activity in animals play an important role in growth and development. In this study, PCR-SSCP method to analyze the HNF-4a gene single nucleotide polymorphisms associated with growth traits. The results showed that polymorphisms of SH1 BB genotype individuals for French Landrace effect of birth length was the highest. SH2 polymorphic loci on the legal systems of AB genotype in Landrace the effect of individual birth weight of the maximum value. At the same time, the site with a large public histological properties of porcine muscle fiber there are significant correlation. AB-type individual muscle fiber diameter and muscle fiber cross-sectional area was significantly lower than AA and BB type (P <0.05).

Keywords: pig hepatocyte nuclear factor-4a PCR-SSCP muscle fiber

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