

研究论文

一个新的棉花腺体形成基因的遗传鉴定

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摘要 湘X9628陆地棉突变体具有植株有腺体、种子低棉酚的特性。种子棉仁中的棉酚含量为0.0354%, 低于国家标准。它的种子无腺体, 当种子萌发后, 长出的真叶有腺体, 但比常规陆地棉品种少。遗传分析表明, 控制湘X9628植株有腺体、种子低棉酚特性由二对重叠隐性基因所控制。等位性测验表明, 其中一对基因是gl2的等位基因, 另一对是gl3的复等位基因, 并且对gl3表现为隐性。因此, 这是一个新发现的棉花腺体形成基因。按照棉花基因命名的规则, 我们建议把控制湘X9628植株有腺体、种子低棉酚特性的基因定名为gln3。

关键词 [陆地棉](#) [腺体发生](#) [遗传分析](#) [复等位基因](#)

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Genetic Identification of a New Gland Forming Gene in Upland Cotton

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Abstract The mutant of Xiang X9628 in Upland cotton (*Gossypium hirsutum* L.) is characterized as its normal glanded leave appearance and low gossypol content seed. The gossypol content of the kernel of the mutant is 0.0354%, which is below the national value for the food usage. Its seed is glandless, and the true leaves are glanded although there is less gland production as compared with the commercial glanded cultivar. Genetic analysis indicated that the glanded leave and low gossypol content character of the mutant is controlled by two pairs of recessive duplicate genes. Allelic tests showed that one of the m is allelic to gl2 gene and another one is one of multi-allele of gl3 loci. So this is a new gland forming gene discovered in *Gossypium*. We proposed that the new gene be named as gln3.

Key words [Upland cotton](#) [Gland production](#) [Inheritance](#) [Multi-allele gene](#)

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