遗传 2003 25 (5): 620-622 ISSN: 0379-4172 CN: 11-5450/R

拟南芥SUPERMAN基因表观突变的研究进展 Progress of the SUPERMAN Epigenetic Mutation in Arabidopsis

唐荣华1,2,张君诚2,庄伟建2,吴为人2 TANG Rong-Hua1,2,ZHANG Jun-Cheng2,ZHUANG Wei-Jian2,WU Wei-Ren2

1.广西农业科学院经济作物研究所，广西 南宁 530007； 2.福建农林大学作物科学学院,福建 福州 350002 1.Institute of Cash Crops,Guangxi Academy of Agricultural Science,Nanning,Guangxi,530007,China; 2. College of Crop Science,Fujian Agriculture & Forestry University,Fuzhou,Fujian,350002,China

收稿日期 修回日期 网络版发布日期 接受日期

摘要 本文综述了拟南芥SUPERMAN基因表观突变体clark kent（clk）的表型、基因型、DNA甲基化及表观突变机制等方面的研究进展。主要研究结果有：clk是SUPERMAN(SUP)的等位基因，能遗传但不稳定，其对称位点（CpG和CPXPG）和非对称位点的胞嘧啶高度甲基化，伴随着SUP转录水平的下降；CpG和CPXPG胞嘧啶甲基转移酶分别是METHYLTRANSFERASE1（MET1）和受KRYPTONITE基因调控的CHROMOMETHYLASE3（CMT3）。

Abstract:The SUPERMAN gene in Arabidopsis has its epigenetic mutants (the clark kent alleles,clk). The phenotype of clk and its genotype and methylated patterns and the epi-mutation mechanisms of SUPERMAN were summarized in the review. Heritable but unstable sup epi-alleles are associated with nearly identical patterns of excess cytosine methylation within the SUP gene and a decreased level of SUP RNA. The methylation of cytosine at CpG and CPXPG is controlled by METHYLTRANSFERASE1 （MET1）and CHROMOMETHYLASE3 (CMT3) which is regulated by KRYPTONITE gene,respectively.

关键词 拟南芥 SUPERMAN 甲基化 表观突变 Key words Arabidopsis SUPERMAN methylation epigenetic mutation

分类号

Abstract

Key words

DOI:

通讯作者