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前沿资讯

1．Fipronil, prices increasing: no margin in the distribution chain in Brazil（预计巴西氟虫腈进口额将获进一步增长 分销链利润空间有限）

简介：Fipronil is an excellent insecticide/termiticide used in quite reduced doses through treatment of seeds, leaf spraying and bait. The first registration in Brazil is from 1994. Today, there are 43 approved registrations, among them, 21 in the WG formulation and 17 in the FS/SC formulation. BASF, market leader, holds 17 registrations. From the neonicotinoid chemical group, fipronil is listed in the environmental re-evaluation promoted by IBAMA, one of the agencies responsible for registration of agricultural chemicals together with ANVISA and MAPA. Soon, as of the beginning of the re-evaluation, the processes for registration of fipronil shall be stopped, as for imidacloprid, thiamethoxam and clothianidin. It has been foreseen that the re-evaluation is completed, their use will be quite restricted.

来源：AgroNews

发布日期:2018-01-24

全文链接:

http://news.agropages.com/News/NewsDetail---25166.htm

2．Canada proposes continued registration for dichlorvos（加拿大建议批准敌敌畏续登）

简介：The Canadian Pest Management Regulatory Agency (PMRA) is proposing to confirm the current registration of dichlorvos products for sale and use in Canada. Evaluation of available relevant scientific information related to the aspects of concern for human health and environment, indicate that dichlorvos does not pose unacceptable risks to human health and the environment, taking into account the implementation of the proposed conditions of use.

来源：AgroNews

发布日期:2018-01-25

全文链接:

http://news.agropages.com/News/NewsDetail---25171.htm

学术文献

1．XIST Derepression in Active X Chromosome Hinders Pig Somatic Cell Nuclear Transfer（活性X染色体的XIST抑制猪体细胞核转录）

简介：Pig cloning by somatic cell nuclear transfer (SCNT) remains extremely inefficient, and many cloned embryos undergo abnormal development. Here, by profiling transcriptome expression, we observed dysregulated chromosome-wide gene expression in every chromosome and identified a considerable number of genes that are aberrantly expressed in

the abnormal cloned embryos. In particular, XIST, a long non-coding RNA gene, showed high ectopic expression in abnormal embryos. We also proved that nullification of the XIST gene in donor cells can normalize aberrant gene expression in cloned embryos and enhance long-term development capacity of the embryos. Furthermore, the increased quality of XIST-deficient embryos was associated with the global H3K9me3 reduction. Injection of H3K9me demethylase Kdm4A into NT embryos could improve the development of pre-implantation stage embryos. However, Kdm4A addition also induced XIST derepression in the active X chromosome and thus was not able to enhance the in vivo long-term developmental capacity of porcine NT embryos.

来源：STEM CELL REPORTS期刊

发布日期:2018-01-11

全文链接:

http://agri.ckcest.cn/ass/1c412aa8-3f6d-45d6-b32e-2b4f8fb2db11.pdf

2．A Regulatory Module Controlling Homeostasis of a Plant Immune Kinase(一种调节植物免疫激酶的调节器)

简介：Plant pattern recognition receptors (PRRs) perceive microbial and endogenous molecular patterns to activate immune signaling. The cytoplasmic kinase BIK1 acts downstream of multiple PRRs as a rate-limiting component, whose phosphorylation and accumulation are central to immune signal propagation. Previous work identified the calcium-dependent protein kinase CPK28 and heterotrimeric G proteins as negative and positive regulators of BIK1 accumulation, respectively. However, mechanisms underlying this regulation remain unknown. Here we show that the plant U-box proteins PUB25 and PUB26 are homologous E3 ligases that mark BIK1 for degradation to negatively regulate immunity. We demonstrate that the heterotrimeric G proteins inhibit PUB25/26 activity to stabilize BIK1, whereas CPK28 specifically phosphorylates conserved residues in PUB25/26 to enhance their activity and promote BIK1 degradation. Interestingly, PUB25/26 specifically target non-activated BIK1, suggesting that activated BIK1 is maintained for immune signaling. Our findings reveal a multi-protein regulatory module that enables robust yet tightly regulated immune responses.

来源：Molecular Cell期刊

发布日期:2018-02-01

全文链接:

http://agri.ckcest.cn/ass/3d4deaa6-785a-4a09-a9e3-a10133306434.pdf

3．Control of auxin-induced callus formation by bZIP59–LBD complex in Arabidopsis regeneration(拟南芥中BZIP59-LBD复合物在调控生长素诱导愈伤组织形成的分子机制)

简介：Induction of pluripotent cells termed callus by auxin represents a typical cell fate change required for plant in vitro regeneration; however, the molecular control of auxin-induced callus formation is largely elusive. We previously identified four Arabidopsis auxin-inducible Lateral Organ Boundaries Domain (LBD) transcription factors that govern

callus formation. Here, we report that Arabidopsis basic region/leucine zipper motif 59 (AtbZIP59) transcription factor forms complexes with LBDs to direct auxin-induced callus formation. We show that auxin stabilizes AtbZIP59 and enhances its interaction with LBD, and that disruption of AtbZIP59 dampens auxin-induced callus formation whereas overexpression of AtbZIP59 triggers autonomous callus formation. AtbZIP59LBD16 directly targets a FAD-binding Berberine (FAD-BD) gene and promotes its transcription, which contributes to callus formation. These findings define the AtbZIP59LBD complex as a critical regulator of auxin-induced cell fate change during callus formation, which provides a new insight into the molecular regulation of plant regeneration and possible developmental programs.

来源： Nature Plants期刊
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http://agri.ckcest.cn/ass/66ee1bec-000c-4c5d-b3f6-793cf248e3f3.pdf