



动物营养学报

CHINESE JOURNAL OF ANIMAL NUTRITION

首页 期刊介绍 编委会 编辑部 投稿须知 期刊订阅 广告服务 联系我们 留言与回复

动物营养学报 2010, Vol. 22 Issue (04) :811-816 DOI: 10.3969/j.issn.1006-267x.2010.04.001

综述

最新目录 | 下期目录 | 过刊浏览 | 高级检索

<< Previous Articles | Next Articles

>>

FoxOs转录因子对机体代谢的调控

王远孝, 王恬*

(南京农业大学动物科技学院, 南京 210095)

Regulation of FoxOs Transcription Factors on Body Metabolism

WANG Yuanxiao, WANG Tian*

(College of Animal Science and Technology, Nanjing Agricultural University, Nanjing 210095, China)

- 摘要
- 参考文献
- 相关文章

Download: PDF (446KB) HTML (0KB) Export: BibTeX or EndNote (RIS) Supporting Info

摘要 Forkhead box O (FoxOs) 转录因子在调控机体代谢中发挥重要作用, 在种属间高度保守, 并受胰岛素信号控制。FoxOs在胰岛素敏感组织如肝脏、胰腺、骨骼肌和胃肠道中表达。在机体能量摄入受限或饥饿状态下, FoxOs位于细胞核内, 激活相关基因转录, 增加肝脏葡萄糖产生, 减少胰岛素分泌, 增加采食量, 引起骨骼肌降解, 为葡萄糖异生提供底物; 然而在能量摄入过多或胰岛素抵抗时 FoxOs被激活, 失去转录调节活性; 同时, FoxOs还参与调控细胞分化、增殖和细胞存活。本文综述了FoxOs转录因子控制胰岛素敏感组织中相关基因表达, 从而调控机体代谢和组织发育。了解FoxOs转录因子的功能和作用机制, 将为调控激素敏感组织发育和机体能量代谢提供依据。

关键词: FoxOs; 新陈代谢; 胰岛素; 胰岛素敏感组织

Abstract: Forkhead Box O (FoxO) transcription factors play an important role in modulating metabolic functions. FoxOs, which are conserved beyond species and regulated by insulin signaling pathway, are usually expressed in insulin-sensitive tissues, such as liver, pancreas, skeletal muscle and gastrointestinal tract. In calorie restriction or starvation, FoxOs are present in nucleus of cells. They active transcription, increase hepatic gluconeogenesis, decrease insulin secretion, increase feed intake and cause degradation of skeletal muscle for supplying substrates of gluconeogenesis. While in the case of insulin resistance or excessive calorie intake, FoxOs are activated and lose the transcription activity. Also, FoxOs regulate the development of insulin-sensitive tissues by controlling cell differentiation, proliferation, and survival. In this paper, the metabolism and cell cycle related genes controlled by FoxOs in insulin-sensitive tissues and the consequently metabolic effects were reviewed. Further clarification of the function and mechanism of FoxOs in insulin-sensitive tissues will strengthen our understanding about tissues development and energy metabolism. [Chinese Journal of Animal Nutrition, 2010, 22 (4) :811-816]

Keywords: FoxOs; metabolism; insulin; insulin-sensitive tissues

引用本文:

. FoxOs转录因子对机体代谢的调控[J]. 动物营养学报, 2010,V22(04): 811-816

. Regulation of FoxOs Transcription Factors on Body Metabolism[J]. Chinese Journal of Animal Nutrition, 2010,V22(04): 811-816.

链接本文:

http://118.145.16.228/Jweb_dwyy/CN/10.3969/j.issn.1006-267x.2010.04.001 或 http://118.145.16.228/Jweb_dwyy/CN/Y2010/V22/I04/811

没有本文参考文献

没有找到本文相关文献

Service

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ Email Alert
- ▶ RSS

作者相关文章

