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硫氧还蛋白与心血管疾病

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硫氧还蛋白是细胞内最重要的二硫键还原酶，对维持细胞内蛋白质的还原状态并正常发挥功能起着重要的作用。此外，硫氧还蛋白、硫氧还蛋白还原酶和硫氧还蛋白过氧化物酶组成了细胞内最重要的抗氧化系统之一，在对抗细胞的氧化应激上起着重要作用。心血管疾病是威胁人类健康的主要疾病，它与炎症反应和氧化应激有着密切的联系。文章将从硫氧还蛋白的抗氧化、抗炎、抗细胞凋亡、调控与炎症基因表达有关的核转录因子的转录活性，以及调节细胞内蛋白质的亚硝基化等诸多方面阐述硫氧还蛋白在防御心血管疾病方面可能具有的生物学功能。

Thioredoxin and Cardiovascular Diseases

Thioredoxin is the major ubiquitous disulfide reductase responsible for maintaining proteins in their reduced state inside cells. Thioredoxin, thioredoxin reductase and thioredoxin peroxidase constitute one of most important antioxidant system which plays a pivotal role against oxidative stress. Cardiovascular disease is one of major threats to human health and closely related to inflammation and oxidative stress in vascular system. In this review, the authors will present some available evidences to show the possible role of thioredoxin in preventing cardiovascular disease in view of its antioxidant, anti-inflammation and anti-apoptosis functions as well as its ability in regulating transcriptional activity of the nuclear transcription factors targeted to inflammatory genes and the protein S-nitrosylation.

关键词

硫氧还蛋白(Thioredoxin); 防御(Prevent); 心血管疾病(Cardiovascular diseases); 功能(Function)