عنوان مقاله:

Eupafolin ameliorates lipopolysaccharide-induced cardiomyocyte autophagy via PI3K/AKT/mTOR signaling pathway

محل انتشار:

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خلاصه مقاله:

Objective(s): Eupafolin, a major active component of Eupatorium perfoliatum L., has anti-inflammatory and anti-oxidant properties. Lipopolysaccharide (LPS) is responsible for myocardial depression. A line of evidences revealed that LPS induces autophagy in cardiomyocytes injury. This study aims to evaluate the effects of eupafolin on LPS-induced cardiomyocyte autophagy. Materials and Methods: The effect of LPS on cell viability was examined by CCK-8. Autophagic protein 2 light chain 3 (LC3II), which was regulated by LPS and eupafolin, was examined using immunofluorescent staining. The expression levels of Beclin-1 and p62 were detected by western blotting. The effects of eupafolin on phosphatidylinositol-3-kinase/ protein kinase B/ mammalian target of rapamycin (PI3K/AKT/mTOR) signaling pathway were also evaluated by western blotting and immunofluorescent staining. Results: Eupafolin pretreatment reduced the expression of LC3II and Beclin-1, whereas p62 was significant increased. In addition, eupafolin promoted expression of PI3K/AKT/mTOR signaling pathway and mTOR inhibitor rapamycin reversed the inhibitory effects on LPS-induced cardiomyocyte autophagy. Conclusion: Eupafolin exerts anti-autophagy activity via .activation of PI3K/AKT/mTOR signaling pathway

کلمات کلیدی:

Autophagy, Cardiomyocyte, Eupafolin, Lipopolysaccharides, Mammalian target of rapamycin