

عنوان مقاله:

Curcumin chitosan microspheres regulate Th γ /Treg balance via IGF γ BP γ - mediated m ϵ A modification of LRP δ in ulcerative colitis

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خلاصه مقاله:

Objective(s): Ulcerative colitis (UC) is a commonly recurrent inflammatory bowel disease. T helper γ (Th γ)/regulatory T (Treg) cell balance plays an essential role in UC progression. However, it is unknown whether curcumin chitosan microspheres (CCM) regulate the Th γ /Treg cell balance. Materials and Methods: The UC mouse model was established by administering 3% dextran sodium sulfate and treated with CCM. The influence of CCM on the Th γ /Treg balance was detected using flow cytometry. Cell experiments were conducted to investigate the role and mechanism of IGF γ BP γ in Th γ /Treg balance. Results: We revealed that CCM demonstrated a significant therapeutic effect on UC. CCM obviously decreased the Th γ cell percentage but boosted the Treg cell percentage in UC mice. CCM remarkably increased the mRNA expression of Foxp γ but suppressed ROR γ t and interleukin- γ mRNA expression. PCR array of RNA modification-related genes revealed that the m ϵ A binding protein IGF γ BP γ was a key molecule in CCM regulation of Th γ /Treg balance. IGF γ BP γ overexpression dramatically repressed the CCM-induced balance of Th γ /Treg cell differentiation. Mechanically, IGF γ BP γ targeted LRP δ and regulated LRP δ through m ϵ A modification. Furthermore, the silencing of LRP δ canceled the suppressive effect of IGF γ BP γ on Th γ /Treg cell percentage. Conclusion: CCM modulated the Th γ /Treg balance through IGF γ BP γ -mediated m ϵ A modification, thereby alleviating UC, and providing new ideas for the treatment of UC.

کلمات کلیدی:

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