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塞来昔布诱导胃癌SGC-7901细胞凋亡和自噬 [点此下载全文](#)

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摘要:

目的: 观察塞来昔布对人胃癌细胞株SGC 7901凋亡和自噬的影响, 并探讨其凋亡的机制。方法: 不同浓度塞来昔布处理SGC 7901细胞后, MTT法检测SGC 7901细胞的增殖, TUNEL法检测SGC 7901细胞的凋亡, 透射电镜观察SGC 7901细胞超微结构的改变, 流式细胞术检测SGC 7901细胞的凋亡率, 实时定量荧光PCR法检测SGC 7901细胞中caspase 8和caspase 9 mRNA的表达。结果: 塞来昔布时间(24、48、72 h)和剂量(50、75、100、125 $\mu\text{mol/L}$)依赖性抑制SGC 7901细胞的增殖, 125 $\mu\text{mol/L}$ 塞来昔布作用SGC 7901 72 h细胞的增殖抑制率高达(85.6 \pm 4.51)%。塞来昔布可诱导SGC 7901细胞凋亡, 透射电镜下观察到典型的凋亡小体和自噬体, 细胞凋亡率从(2.2 \pm 1.32)%上升到(35.7 \pm 5.73)% ($P < 0.01$)。塞来昔布作用后, SGC 7901细胞中caspase 8和caspase 9 mRNA表达明显增加, 呈时间和剂量依赖性 ($P < 0.05$)。结论: 塞来昔布通过激活依赖caspase 8的死亡受体途径和依赖caspase 9的线粒体途径诱导胃癌SGC 7901细胞凋亡, 同时诱发自噬性细胞死亡。

关键词: [塞来昔布](#) [胃癌细胞](#) [凋亡](#) [自噬](#)

Celecoxib induces apoptosis and autophagy of gastric cancer SGC 7901 cells [Download Fulltext](#)

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Abstract:

Objective: To observe the effect of celecoxib on apoptosis and autophagy of human gastric cancer cell line SGC 7901, and to investigate the mechanism of apoptosis. Methods: SGC 7901 cells were treated with different concentrations of celecoxib, proliferation of SGC 7901 cells was studied by MTT assay, apoptosis was assessed by TUNEL, ultrastructure changes was observed by transmission electron microscopy, apoptotic rate was examined by flow cytometry, and expression of caspase 8, caspase 9 mRNA was analyzed by real time quantitative PCR. Results: Celecoxib inhibited proliferation of SGC 7901 cells in a time and dose dependent manner, with inhibitory rate of (85.6 \pm 4.51)% at 125 $\mu\text{mol/L}$ celecoxib for 72 h. Celecoxib induced apoptosis of SGC 7901 cells, typical apoptotic body and autophagosome were observed under TEM, and apoptotic rate increased from (2.2 \pm 1.32)% to (35.7 \pm 5.73)% ($P < 0.05$) as detected by FCM. Expression of caspase 8 and caspase 9 mRNA increased sharply in SGC 7901 cells treated with celecoxib in a time and dose dependent manner. Conclusion: Celecoxib can induce apoptosis of gastric cancer SGC 7901 cells by activating caspase 8 in the death receptor pathway and caspase 9 in the mitochondrial pathway, and induce autophagic cell death.

Keywords: [celecoxib](#) [gastric cancer](#) [apoptosis](#) [autophagy](#)

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