

Euphol da Euphorbia tirucalli inibe seletivamente células do câncer gástrico CS12 por induzir apoptose via ERK1/ERK2. Provoca apoptose por aumentar BAX diminuir Bcl-2 e ativar caspase-3 e é antiproliferativo aumentando p27(kip1) e diminuindo ciclina B1

The anti-proliferative effects of euphol were associated with the increased p27(kip1) levels and decreased cyclin B1 levels. Inhibition of ERK1/2 activation by PD98059 reversed euphol-induced pro-apoptotic protein expression

## **Euphol from Euphorbia tirucalli selectively inhibits human gastric cancer cell growth through the induction of ERK1/2-mediated apoptosis.**

[Lin MW<sup>1</sup>](#), [Lin AS](#), [Wu DC](#), [Wang SS](#), [Chang FR](#), [Wu YC](#), [Huang YB](#).

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### **Author information**

- <sup>1</sup>Graduate Institute of Clinical Pharmacy, College of Pharmacy, Kaohsiung Medical University, Kaohsiung 807, Taiwan, ROC.

### **Abstract**

Gastric cancer is one of the most common malignancies worldwide, and the main cause of cancer-related death in Asia. The present study assessed the anticancer effects of euphol, a triterpene alcohol with anti-inflammatory and antiviral activities on human gastric cancer cells. Euphol showed higher cytotoxicity activity against human gastric CS12 cancer cells than against noncancer CSN cells. In addition, it up-regulated the pro-apoptotic protein BAX and down-regulated the prosurvival protein Bcl-2, causing mitochondrial dysfunction, possibly by caspase-3 activation. The anti-proliferative effects of euphol were associated with the increased p27(kip1) levels and decreased cyclin B1 levels. Inhibition of ERK1/2 activation by PD98059 reversed euphol-induced pro-apoptotic protein expression and cell death. Taken together, these findings suggest that euphol selectively induced gastric cancer cells apoptosis by modulation of ERK signaling, and could thus be of value for cancer therapy.

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