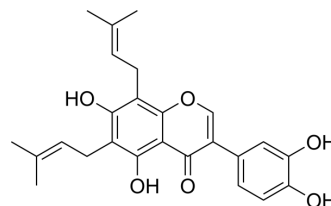


## 6,8-Diprenylorobol

<b>Cat. No.:</b>	HY-N2693
<b>CAS No.:</b>	66777-70-6
<b>Molecular Formula:</b>	C <sub>25</sub> H <sub>26</sub> O <sub>6</sub>
<b>Molecular Weight:</b>	422.47
<b>Target:</b>	Apoptosis; Reactive Oxygen Species; Caspase; Akt; ERK; JNK; p38 MAPK; Bcl-2 Family
<b>Pathway:</b>	Apoptosis; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; PI3K/Akt/mTOR; MAPK/ERK Pathway; Stem Cell/Wnt
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

#### Description

6,8-Diprenylorobol, a prenylated isoflavone, is a nature product that could be isolated from the leaves of *Cudrania tricuspidata*. 6,8-Diprenylorobol antiproliferative effect and induces apoptosis through activation of p53 and generation of ROS<sup>[1][2]</sup>.

#### In Vitro

6,8-Diprenylorobol (20-60 μM; 24-72 h) inhibits proliferation in LoVo and HCT15 cells<sup>[1]</sup>.  
 6,8-Diprenylorobol (20-60 μM; 24 h) induces apoptosis and activates p53 and regulates MAPKs in LoVo and HCT15 cells<sup>[1]</sup>.  
 6,8-Diprenylorobol (20-60 μM; 1 h) increases ROS level in LoVo and HCT15 cells<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Viability Assay<sup>[1]</sup>

Cell Line:	LoVo and HCT15 cells
Concentration:	20, 40, and 60 μM
Incubation Time:	24, 48, and 72 hours
Result:	Inhibited the growth of LoVo and HCT15 cells in a dose- and dose-dependent manner.

#### Apoptosis Analysis<sup>[1]</sup>

Cell Line:	LoVo and HCT15 cells
Concentration:	20, 40, and 60 μM
Incubation Time:	24 hours
Result:	Induced apoptosis of LoVo and HCT15 cells in a dose- and time-dependent manner.

#### Western Blot Analysis<sup>[1]</sup>

Cell Line:	LoVo and HCT15 cells
Concentration:	20, 40, and 60 μM
Incubation Time:	24, 48, and 72 hours

Result:

Decreased the expression of PARP and increased the expression of cleaved PARP.  
Up-regulated Bax and Bim expressions and downregulated Bcl-2 expression.  
Up-regulated cleaved caspase-3, -7, -8, and -9 expressions, and down-regulated procaspase-3, -7, -8, and -9 expressions.  
Decreased the expression of phosphorylated Akt, ERK, JNK, and p38 and increased the expression of FOXO3, p53, p27, and p21.

## REFERENCES

- [1]. Choi YJ, et, al. 6,8-Diprenylorobol induces apoptosis in human colon cancer cells via activation of intracellular reactive oxygen species and p53. *Environ Toxicol.* 2021 May;36(5):914-925.
- [2]. Tuan Anh HL, et, al. Prenylated isoflavones from *Cudrania tricuspidata* inhibit NO production in RAW 264.7 macrophages and suppress HL-60 cells proliferation. *J Asian Nat Prod Res.* 2017 May;19(5):510-518.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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