

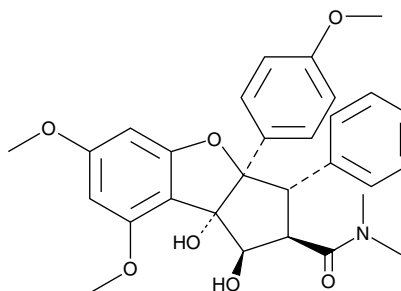
# Product Information



## Rocaglamide

Item No. 14841

**CAS Registry No.:** 84573-16-0  
**Formal Name:** (1R,2R,3S,3aR,8bS)-2,3,3a,8b-tetrahydro-1,8b-dihydroxy-6,8-dimethoxy-3a-(4-methoxyphenyl)-N,N-dimethyl-3-phenyl-1H-cyclopenta[b]benzofuran-2-carboxamide  
**Synonyms:** NSC 326408, Roc-A, Rocaglamide A  
**MF:** C<sub>29</sub>H<sub>31</sub>NO<sub>7</sub>  
**FW:** 505.6  
**Purity:** ≥95%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 210, 275 nm



### Laboratory Procedures

For long term storage, we suggest that rocaglamide be stored as supplied at -20°C. It should be stable for at least two years.

Rocaglamide is supplied as a crystalline solid. A stock solution may be made by dissolving the rocaglamide in the solvent of choice. Rocaglamide is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. The solubility of rocaglamide in these solvents is approximately 5 and 10 mg/ml, respectively.

Rocaglamide is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Rocaglamide is an anti-inflammatory, insecticidal, and anticancer tetrahydrobenzofuran isolated from *Aglaia* species. It has been shown to inhibit both TNF-α and the activation of nuclear factor-κB in Jurkat T cells with IC<sub>50</sub> values in the nanomolar range.<sup>1</sup> At 25 nM, rocaglamide induces apoptosis in various human leukemia cell lines, activating p38 MAPK/JNK and suppressing ERK.<sup>2</sup> Rocaglamide also reduces IFN-γ, TNF-α, IL-2, and IL-4 production in peripheral blood T cells at a concentration of 50 nM.<sup>3</sup> Furthermore, rocaglamide can inhibit the T cell expression of the immune response transcription factor, nuclear factor of activated T cells.<sup>3</sup>

### References

1. Baumann, B., Bohnenstengel, F., Siegmund, D., *et al.* Rocaglamide derivatives are potent inhibitors of NF-κB activation in T-cells. *J. Biol. Chem.* **277**(47), 44791-44800 (2002).
2. Zhu, J.Y., Lavrik, I.N., Mählke, U., *et al.* The traditional Chinese herbal compound rocaglamide preferentially induces apoptosis in leukemia cells by modulation of mitogen-activated protein kinase activities. *Int. J. Cancer* **121**(8), 1839-1846 (2007).
3. Proksch, P., Giaisi, M., Treiber, M.K., *et al.* Rocaglamide derivatives are immunosuppressive phytochemicals that target NF-AT activity in T cells. *J. Immunol.* **174**(11), 7075-7084 (2005).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/14841](http://www.caymanchem.com/catalog/14841)

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