

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: C₂₉H₃₁NO₇

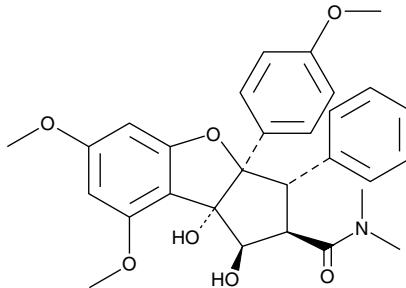
FW: 505.6

Purity: ≥95%

Stability: ≥2 years at -20°C

Supplied as: A crystalline solid

UV/Vis.: λ_{max}: 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 IC₅₀ values in the nanomolar range.¹ At 25 nM, rocaglamide induces apoptosis in various human leukemia cell lines, activating p38 MAPK/JNK and suppressing ERK.² Rocaglamide also reduces IFN-γ, TNF-α, IL-2, and IL-4 production in peripheral blood T cells at a concentration of 50 nM.³ Furthermore, rocaglamide can inhibit the T cell expression of the immune response transcription factor, nuclear factor of activated T cells.³

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., Mahlknecht, 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

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 07/17/2014