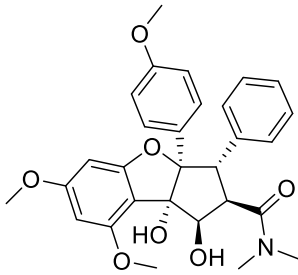


Product data sheet



MedKoo Cat#: 406598 Name: Rocaglamide CAS#: 84573-16-0 Chemical Formula: C ₂₉ H ₃₁ NO ₇ Exact Mass: 505.2101 Molecular Weight: 505.56		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.	
	In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Rocaglamide is the first cyclopenta[b]benzofuran derivative (flavagline), isolated from *Aglaia elliptifolia* in 1982 by King and colleagues based on its antileukemic activity. Like other flavaglines, rocaglamide displays potent insecticidal, antifungal, anti-inflammatory and anticancer activities.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	80.0	158.24
Ethanol	5.0	9.89

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.98 mL	9.89 mL	19.78 mL
5 mM	0.40 mL	1.98 mL	3.96 mL
10 mM	0.20 mL	0.99 mL	1.98 mL
50 mM	0.04 mL	0.20 mL	0.40 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Xie L, Cheng L, Wei Y. Mitomycin C enhanced the antitumor efficacy of Rocaglamide in colorectal cancer. *Pathol Res Pract*. 2023 Mar;243:154350. doi: 10.1016/j.prp.2023.154350. Epub 2023 Feb 4. PMID: 36780842.
- So L, Obata-Ninomiya K, Hu A, Muir VS, Takamori A, Song J, Buckner JH, Savan R, Ziegler SF. Regulatory T cells suppress CD4⁺ effector T cell activation by controlling protein synthesis. *J Exp Med*. 2023 Mar 6;220(3):e20221676. doi: 10.1084/jem.20221676. Epub 2023 Jan 4. PMID: 36598533; PMCID: PMC9827529.

In vivo study

- Dai C, Zhou X, Wang L, Tan R, Wang W, Yang B, Zhang Y, Shi H, Chen D, Wei L, Chen Z. Rocaglamide Prolonged Allograft Survival by Inhibiting Differentiation of Th1/Th17 Cells in Cardiac Transplantation. *Oxid Med Cell Longev*. 2022 Jan 17;2022:2048095. doi: 10.1155/2022/2048095. PMID: 35087613; PMCID: PMC8787457.
- Wu Y, Giaisi M, Köhler R, Chen WM, Krammer PH, Li-Weber M. Rocaglamide breaks TRAIL-resistance in human multiple myeloma and acute T-cell leukemia in vivo in a mouse xenograft model. *Cancer Lett*. 2017 Mar 28;389:70-77. doi: 10.1016/j.canlet.2016.12.010. Epub 2016 Dec 18. PMID: 27998762.

7. Bioactivity

Product data sheet



Biological target:

Rocaglamide (RocA) is a heat shock factor 1 (HSF1) activation inhibitor with an IC50 of ~50 nM.

In vitro activity

This study concludes that combination treatment of rocaglamide and mitomycin C is a highly effective tumor therapy. A low concentration of mitomycin C combined rocaglamide ROC significantly promoted HCT116 and HT29 cell apoptosis and inhibited cell proliferation by downregulating the expression of Bcl-2 and c-FLIP, upregulating the expression of Bax, activating the caspase cascade, arresting cell cycle in G1 phase, and increasing the level of reactive oxygen species.

Reference: Pathol Res Pract. 2023 Mar;243:154350. <https://pubmed.ncbi.nlm.nih.gov/36780842/>

In vivo activity

In post-heart transplant operated mice, rocaglamide was found to regulate oxidative stress response and reduce inflammatory cell infiltration and organ injury, which have been associated with the inhibition of NF-AT activation in T cells.

Reference: Oxid Med Cell Longev. 2022 Jan 17;2022:2048095. <https://pubmed.ncbi.nlm.nih.gov/35087613/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.