

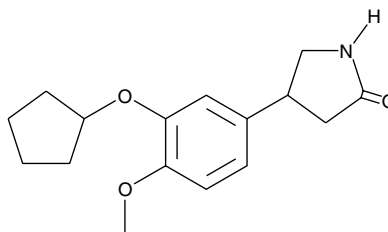
Product Information



Rolipram

Item No. 10011132

CAS Registry No.: 61413-54-5
Formal Name: 4-[3-(cyclopentyloxy)-4-methoxyphenyl]-2-pyrrolidinone
Synonyms: SB 95952, ZK 62711
MF: C₁₆H₂₁NO₃
FW: 275.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 231, 280 nm



Laboratory Procedures

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

Rolipram is supplied as a crystalline solid. A stock solution may be made by dissolving the rolipram in an organic solvent purged with an inert gas. Rolipram is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of rolipram in ethanol is approximately 5 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Rolipram is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, rolipram should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Rolipram has a solubility of approximately 0.5 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Type 4 cyclic nucleotide phosphodiesterases (PDE4) isoforms selectively inactivate the second messenger cAMP by hydrolyzing the phosphodiester bond, producing AMP. Rolipram is a cell-permeable selective PDE4 inhibitor. Since PDE4 is abundant in leukocytes, rolipram inhibits inflammation by suppressing leukocyte function, inhibiting C5a-stimulated LTC₄ synthesis in eosinophils (IC₅₀ = 200 nM),¹ and lipopolysaccharide-induced TNF synthesis in monocytes (IC₅₀ = 360 nM).² Rolipram also enhances neuronal survival,³ has antipsychotic effects in mice,⁴ and suppresses bone loss in ovariectomized rats.⁵

References

1. Tenor, H., Hatzelmann, A., Church, M.K., *et al. Br. J. Pharmacol.* **118**, 1727-1735 (1996).
2. Souness, J.E., Griffin, M., Maslen, C., *et al. Br. J. Pharmacol.* **118**, 649-658 (1996).
3. Sasaki, T., Kitagawa, K., Omura-Matsuoka, E., *et al. Stroke* **38**, 1597-1605 (2007).
4. Kaness, S.J., Tokarczyk, J., Siegel, S.J., *et al. Neuroscience* **144**, 239-246 (2007).
5. Yao, W., Tian, X.Y., Chen, J., *et al. J. Musculoskelet. Neuronal. Interact.* **7**(2), 119-130 (2007).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10011132

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, 06/25/2014

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