

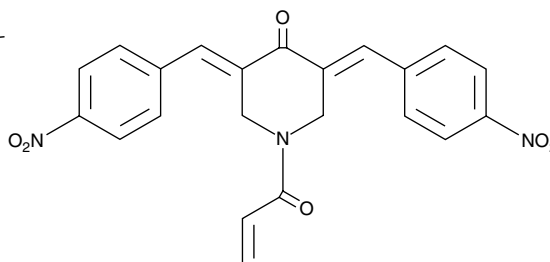
Product Information



b-AP15

Item No. 11324

CAS Registry No.: 1009817-63-3
Formal Name: 3E,5E-bis[(4-nitrophenyl)methylene]-1-(1-oxo-2-propen-1-yl)-4-piperidinone
MF: C₂₂H₁₇N₃O₆
FW: 419.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 334 nm



Laboratory Procedures

For long term storage, we suggest that b-AP15 be stored as supplied at -20°C. It should be stable for at least two years. b-AP15 is supplied as a crystalline solid. A stock solution may be made by dissolving the b-AP15 in the solvent of choice. b-AP15 is soluble in DMSO at a concentration of approximately 20 mg/ml.

b-AP15 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.

Proteasome-associated deubiquitinases (DUBs) release ubiquitin from proteasome-targeted ubiquitinated proteins, regenerating free ubiquitin.¹ b-AP15 is an inhibitor of ubiquitin-specific-processing protease 14 (USP14) and ubiquitin carboxyl-terminal hydrolase isozyme L5 (UCHL5), two proteasome-associated DUBs.² It inhibits DUB activity in purified 19S proteasomes with an IC₅₀ value of 2.1 μM.² It exhibits little or no activity against several other DUBs.² Through its effects on USP14 and UCHL5, b-AP15 blocks tumor progression *in vivo* in mice and prevents organ infiltration in mouse models of myeloid leukemia.^{2,3} b-AP15 also renders tumor cells sensitive to TNF-mediated apoptosis by natural killer and T cells.⁴

References

1. Zhang, W. and Sidhu, S.S. Development of inhibitors in the ubiquitination cascade. *FEBS Lett.* **588(2)**, 356-367 (2014).
2. D'Arcy, P., Brnjic, S., Olofsson, M.H., *et al.* Inhibition of proteasome deubiquitinating activity as a new cancer therapy. *Nat. Med.* **17(12)**, 1636-1640 (2011).
3. Tian, Z., D'Arcy, P., Wang, X., *et al.* A novel small molecule inhibitor of deubiquitylating enzyme USP14 and UCHL5 induces apoptosis in multiple myeloma and overcomes bortezomib resistance. *Blood* **123(5)**, 706-716 (2014).
4. Sarhan, D., Wennerberg, E., D'Arcy, P., *et al.* A novel inhibitor of proteasome deubiquitinating activity renders tumor cells sensitive to TRAIL-mediated apoptosis by natural killer cells and T cells. *Cancer Immunol. Immunother.* **62(8)**, 1359-1368 (2013).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11324

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, 03/20/2014

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