

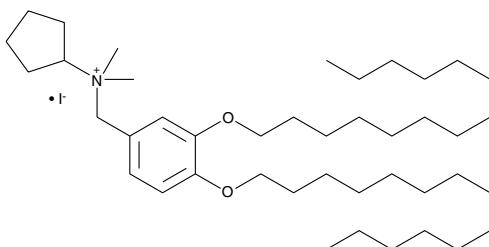
# Product Information



## CAY10614

Item No. 13615

**CAS Registry No.:** 1202208-36-3  
**Formal Name:** N-cyclopentyl-N,N-dimethyl-3,4-bis(tetradecyloxy)-benzenemethanaminium, iodide  
**MF:** C<sub>42</sub>H<sub>78</sub>NO<sub>2</sub> • I  
**FW:** 756.0  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that CAY10614 be stored as supplied at -20°C. It should be stable for at least two years.

CAY10614 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10614 in the solvent of choice. CAY10614 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of CAY10614 in these solvents is approximately 0.14 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that 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.

Lipid A is a lipid-rich component of endotoxin, also known as lipopolysaccharide (LPS), which in turn is part of the outer membrane of Gram-negative bacteria. Lipid A activates toll-like receptor 4 (TLR4), initiating an immune response. CAY10614 is an antagonist of lipid A activation of TLR4, exhibiting an IC<sub>50</sub> value of 1.68 μM in a cell-based assay using modified human embryonic kidney (HEK) cells.<sup>1</sup> It does not significantly affect HEK cell viability. In a model of sepsis, CAY10614 dramatically and significantly improves survival of mice given intraperitoneal LPS.<sup>1</sup>

### Reference

1. Piazza, M., Rossini, C., Fiorentina, S.D., *et al.* Glycolipids and benzylammonium lipids as novel antisepsis agents: Synthesis and biological characterization. *J. Med. Chem.* **52**, 1209-1213 (2009).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/13615](http://www.caymanchem.com/catalog/13615)

### 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](mailto:custserv@caymanchem.com)

**Web**  
[www.caymanchem.com](http://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.**

#### MATERIAL 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 Material 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.

Cayman'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.

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, 12/05/2011