

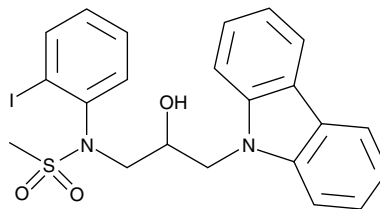
# Product Information



**KL002**

Item No. 13879

**CAS Registry No.:** 439141-72-7  
**Formal Name:** N-[3-(9H-carbazol-9-yl)-2-hydroxypropyl]-N-(2-iodophenyl)-methanesulfonamide  
**MF:** C<sub>22</sub>H<sub>21</sub>IN<sub>2</sub>O<sub>3</sub>S  
**FW:** 520.4  
**Purity:** ≥95%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 229, 235, 261, 293, 328, 342 nm



## Laboratory Procedures

For long term storage, we suggest that KL002 be stored as supplied at -20°C. It should be stable for at least two years.

KL002 is supplied as a crystalline solid. A stock solution may be made by dissolving the KL002 in the solvent of choice. KL002 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of KL002 in these solvents is approximately 1, 5, and 10 mg/ml, respectively.

KL002 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, KL002 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. KL002 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The cryptochrome proteins CRY1 and CRY2, which play central roles in maintaining the circadian clock, are expressed and then degraded in a rhythmic pattern.<sup>1,2</sup> KL002 is a cell-permeable carbazolic compound which directly interacts with and stabilizes CRY1 and CRY2, preventing ubiquitin-dependent degradation while lengthening the circadian period (IC<sub>50</sub> = 1.2-5.9 μM).<sup>2</sup> This product can be used to study the regulation of cryptochrome-dependent physiology and aid in the development of clock-based therapeutics of diabetes.

## References

1. Busino, L., Bassermann, F., Maiolica, A., *et al.* SCFF<sup>bx13</sup> controls the oscillation of the circadian clock by directing the degradation of cryptochrome proteins. *Science* **316**, 900-904 (2007).
2. Hirota, T., Lee, J.W., St. John, P.C., *et al.* Identification of small molecule activators of cryptochrome. *Science* **337**, 1094-1097 (2012).

## Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/13879](http://www.caymanchem.com/catalog/13879)

## 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.

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, 01/07/2012