

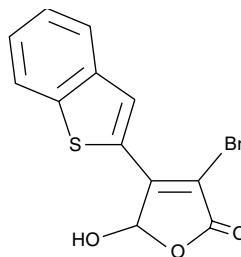
# Product Information



## CAY10526

Item No. 10010088

**CAS Registry No.:** 938069-71-7  
**Formal Name:** 4-(benzo[b]thiophen-2-yl)-3-bromo-5-hydroxydihydrofuran-2(3H)-one  
**MF:** C<sub>12</sub>H<sub>7</sub>BrO<sub>3</sub>S  
**FW:** 311.1  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that CAY10526 be stored as supplied at -20°C. It will be stable for at least two years.

CAY10526 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10526 in an organic solvent purged with an inert gas. CAY10526 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CAY10526 in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

CAY10526 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10526 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CAY10526 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) is the major PG synthesized at sites of inflammation and plays an important role in different inflammatory diseases. It acts as a mediator of pain and inflammation and promotes bone destruction. The increased synthesis of PGE<sub>2</sub> during inflammation can be accounted for by increased expression of both cyclooxygenase-2 (COX-2) and microsomal PGE synthase-1 (mPGES-1).<sup>1-3</sup> CAY10526 is an inhibitor of PGE<sub>2</sub> production through the selective modulation of mPGES-1 expression. It dose-dependently inhibits PGE<sub>2</sub> production in lipopolysaccharide-stimulated RAW 264.7 cells with an IC<sub>50</sub> value of 1.8 μM without any effect on COX-2 expression.<sup>4</sup>

### References

1. Claveau, D., Sirinyan, M., Guay, J., *et al.* Microsomal prostaglandin E synthase-1 is a major terminal synthase that is selectively up-regulated during cyclooxygenase-2-dependent prostaglandin E<sub>2</sub> production in the rat adjuvant-induced arthritis model. *J. Immunol.* **170**, 4738-4744 (2003).
2. Guay, J., Bateman, K., Gordon, R., *et al.* Carrageenan-induced paw edema in rat elicits a predominant prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) response in the central nervous system associated with the induction of microsomal PGE<sub>2</sub> synthase-1. *J. Biol. Chem.* **279(23)**, 24866-24872 (2004).
3. Stichtenoth, D.O., Thorén, S., Bian, H., *et al.* Microsomal prostaglandin E synthase is regulated by proinflammatory cytokines and glucocorticoids in primary rheumatoid synovial cells. *J. Immunol.* **167**, 469-474 (2001).
4. Guerrero, M.D., Aquino, M., Bruno, I., *et al.* Synthesis and pharmacological evaluation of a selected library of new potential anti-inflammatory agents bearing the γ-hydroxybutenolide scaffold: a new class of inhibitors of prostanoid production through the selective modulation of microsomal prostaglandin E synthase-1 expression. *J. Med. Chem.* **50**, 2176-2184 (2007).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10010088](http://www.caymanchem.com/catalog/10010088)

**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, 12/05/2011

### 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)