

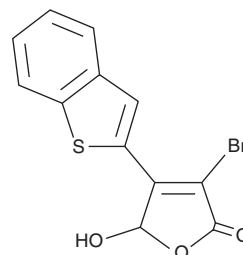
# PRODUCT INFORMATION



**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%  
**UV/Vis.:** λ<sub>max</sub>: 215, 332 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

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.

## Description

Prostaglandin E<sub>2</sub> (PGE<sub>2</sub>; Item No. 14010) 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> CAY10526 also reduces the *in vitro* activities of mPGES-1, hematopoietic PGD synthase, and lipocalin-type PGD synthase when used at 300 μM.<sup>5</sup>

## References

1. Claveau, D., Sirinyan, M., Guay, J., *et al. J. Immunol.* **170**, 4738-4744 (2003).
2. Guay, J., Bateman, K., Gordon, R., *et al. J. Biol. Chem.* **279(23)**, 24866-24872 (2004).
3. Stichtenoth, D.O., Thorén, S., Bian, H., *et al. J. Immunol.* **167**, 469-474 (2001).
4. Guerrero, M.D., Aquino, M., Bruno, I., *et al. J. Med. Chem.* **50**, 2176-2184 (2007).
5. Yu, R., Xiao, L., Zhao, G., *et al. J. Pharmacol. Exp. Ther.* **339(2)**, 716-725 (2011).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/25/2024

## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM