

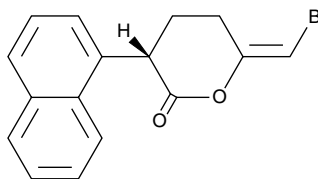
# Product Information



## (S)-Bromoenol lactone

Item No. 10006801

**CAS Registry No.:** 478288-94-7  
**Formal Name:** 6E-(bromoethylene)tetrahydro-3S-(1-naphthalenyl)-2H-pyran-2-one  
**Synonym:** (S)-BEL  
**MF:** C<sub>16</sub>H<sub>13</sub>BrO<sub>2</sub>  
**FW:** 317.2  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate  
**UV/Vis.:** λ<sub>max</sub>: 223, 280 nm



### Laboratory Procedures

For long term storage, we suggest that (S)-bromoenol lactone ((S)-BEL) be stored as supplied at -20°C. It should be stable for at least one year.

(S)-BEL is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of (S)-BEL in these solvents is approximately 5, 25, and 50 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of (S)-BEL is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of (S)-BEL in PBS (pH 7.2) is approximately 0.05 mg/ml. We do not recommend storing the aqueous solution for more than one day.

The phospholipases are an extensive family of lipid hydrolases that function in cell signaling, digestion, membrane remodeling, and as venom components.<sup>1</sup> The calcium-independent phospholipases (iPLA<sub>2</sub>) are a PLA<sub>2</sub> subfamily closely associated with the release of arachidonic acid in response to physiologic stimuli. (S)-BEL is an irreversible, chiral, mechanism-based inhibitor of iPLA<sub>2β</sub> that inhibits the vasopressin-induced release of arachidonate from cultured rat aortic smooth muscle (A10) cells with an IC<sub>50</sub> value of 2 μM.<sup>2</sup> (S)-BEL is more than 1,000-fold selective for iPLA<sub>2</sub> versus cPLA<sub>2</sub>, and is 10-fold selective for iPLA<sub>2β</sub> versus iPLA<sub>2γ</sub>.

### References

1. Balsinde, J., Balboa, M.A., Insel, P.A., *et al.* Regulation and inhibition of phospholipase A<sub>2</sub>. *Annu. Rev. Pharmacol. Toxicol.* **39**, 175-189 (1999).
2. Jenkins, C.M., Han, X., Mancuso, D.J., *et al.* Identification of calcium-independent phospholipase A<sub>2</sub> (iPLA<sub>2</sub>) β, and not iPLA<sub>2γ</sub>, as the mediator of arginine vasopressin-induced arachidonic acid release in A-10 smooth muscle cells. *J. Biol. Chem.* **277**(36), 32807-32814 (2002).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10006801](http://www.caymanchem.com/catalog/10006801)

**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, 06/18/2012

### 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)