

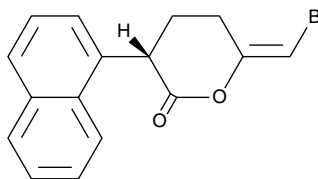
# Product Information



## (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



### 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>2β</sub> versus cPLA<sub>2γ</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)

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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