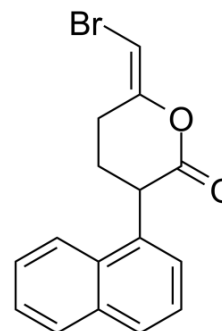


Bromo-enol lactone

Cat. No.:	HY-107411		
CAS No.:	88070-98-8		
Molecular Formula:	C ₁₆ H ₁₃ BrO ₂		
Molecular Weight:	317.18		
Target:	Phospholipase		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Pure form	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (788.20 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.1528 mL	15.7639 mL	31.5278 mL
	5 mM	0.6306 mL	3.1528 mL	6.3056 mL
	10 mM	0.3153 mL	1.5764 mL	3.1528 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 6.25 mg/mL (19.70 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bromo-enol lactone ((6E)-Bromo-enol lactone) is a suicide-based irreversible, selective, potent inhibitor of **calcium-independent phospholipase A₂ (iPLA₂β)** with an IC₅₀ value of approximately 7 μM, which inhibits antigen-stimulated mast cell exocytosis without blocking Ca²⁺ influx^{[1][2]}.

IC₅₀ & Target

PLA2
7 μM (IC₅₀)

In Vitro

In RBL 2H3 and bone marrow-derived mast cells (BMMCs), Ca²⁺ entry is critical for exocytosis. Bromo-enol lactone inhibits exocytosis when stimulated using a Ca²⁺ ionophore A23187, which passively transports Ca²⁺ down a concentration gradient and also in permeabilised mast cells where Ca²⁺ entry is no longer relevant. Moreover, Bromo-enol lactone has only a minor effect on antigen- or thapsigargin-stimulated Ca²⁺ signalling, both the release from internal stores and sustained elevation due to Ca²⁺ influx^[1].

REFERENCES

- [1]. Fensome-Green A, et al. Bromoenol lactone, an inhibitor of Group V1A calcium-independent phospholipase A2 inhibits antigen-stimulated mast cell exocytosis without blocking Ca²⁺ influx. *Cell Calcium*. 2007 Feb;41(2):145-53.
- [2]. Takuma T, et al. Role of Ca²⁺-independent phospholipase A2 in exocytosis of amylase from parotid acinar cells. *J Biochem*. 1997 Jun;121(6):1018-24.
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Caution: Product has not been fully validated for medical applications. For research use only.

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