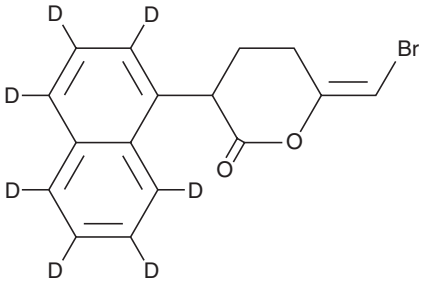
PRODUCT INFORMATION

Bromoenol lactone-d_7

Item No. 9000528

Formal Name:	6E-(bromomethylene)tetrahydro-3-(1-naphthalenyl-2,3,4,5,6,7,8-d_7)-2H-pyran-2-one
Synonyms:	BEL-d_7, Haloenol lactone-d_7, HELSS-d_7
MF:	$C_{16}H_6D_7BrO_2$
FW:	324.2
Chemical Purity:	≥98% (Bromoenol lactone)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_7); ≤1% d_0
UV/Vis.:	λ_{max}: 223, 280 nm
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Bromoenol lactone-d_7 (BEL-d_7) contains seven deuterium atoms at the 2, 3, 4, 5, 6, 7, and 8 positions. It is intended for use as an internal standard for the quantification of BEL by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

BEL-d_7 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 BEL-d_7 in these solvents is approximately 5, 25, and 50 mg/ml, respectively.

Description

BEL is a selective, potent, irreversible, mechanism-based inhibitor of phospholipase A_2 (iPLA$_2$) with a K_i value of 180 nM.[1] It also inhibits macrophage iPLA$_2$ in a concentration-dependent manner with an IC_{50} value of 60 nM and is an effective enzyme-activated irreversible inhibitor of chymotrypsin (K_i = 636 nM).[2,3]

References

1. Hazen, S.L., Zupan, L.A., Weiss, R.H., *et al.* Suicide inhibition of canine myocardial cytosolic calcium-independent phospholipase A_2. *J. Biol. Chem.* **266(11)**, 7227-7232 (1991).
2. Ackermann, E.J., Conde-Frieboes, K., and Dennis, E.A. Inhibition of macrophage Ca^{2+}-independent phospholipase A_2 by bromoenol lactone and trifluoromethyl ketones. *J. Biol. Chem.* **270(1)**, 445-450 (1995).
3. Balsinde, J., Bianco, I.D., Ackermann, E.J., *et al.* Inhibition of calcium-independent phospholipase A_2 prevents arachidonic acid incorporation and phospholipid remodeling in P388D_1 macrophages. *Proc. Natl. Acad. Sci. USA* **92(18)**, 8527-8531 (1995).

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