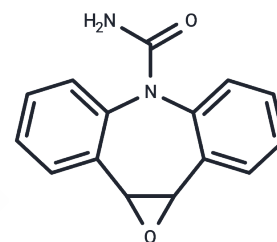


## Carbamazepine 10,11-epoxide

## Chemical Properties

CAS No. :	36507-30-9
Formula:	C <sub>15</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>
Molecular Weight:	252.27
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Carbamazepine 10,11-epoxide is an active metabolite of the anticonvulsant carbamazepine. It is formed by the cytochrome P450 (CYP) isoforms CYP3A4 and CYP2C8 in microsomes from HepG2 cells expressing CYP3A4 or CYP2C8, respectively. Carbamazepine 10,11-epoxide exhibits anticonvulsant activity against maximal electroshock-induced seizures in mice and has been detected in wastewater effluent [1][2][3].
Targets(IC50)	Others,Endogenous Metabolite

## Solubility Information

Solubility	DMSO: 1 mg/mL (3.96 mM),Sonication is recommended. DMF:PBS (pH 7.2) (1:5): 0.16 mg/mL (0.63 mM),Sonication is recommended. DMF: 5 mg/mL (19.82 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.964 mL	19.820 mL	39.6401 mL
5 mM	0.7928 mL	3.964 mL	7.928 mL
10 mM	0.3964 mL	1.982 mL	3.964 mL
50 mM	0.0793 mL	0.3964 mL	0.7928 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Kerr, B.M., Thummel, K.E., Wurden, C.J., et al. Human liver carbamazepine metabolism. Role of CYP3A4 and CYP2C8 in 10,11-epoxide formation *Biochem. Pharmacol.* 47(11)1969-1979(1994)

Bourgeois, B.F., and Wad, N. Individual and combined antiepileptic and neurotoxic activity of carbamazepine and carbamazepine-10,11-epoxide in mice *J. Pharmacol. Exp. Ther.* 231(2)411-415(1984)

Miao, X.-S., Yang, J.-J., and Metcalfe, C.D. Carbamazepine and its metabolites in wastewater and in biosolids in a municipal wastewater treatment plant *Environ. Sci. Technol.* 39(19)7469-7475(2005)

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