

Catalog # 10-2449

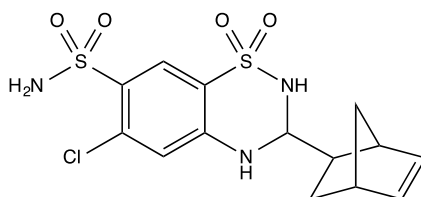
Cyclothiazide

CAS# 2259-96-3

6-Chloro-3,4-dihydro-3-(5-norbornen-2-yl)-2*H*-1,2,4-benzothiadiazine-7-sulfonamide-1,1-dioxide

LY-35483

Lot # FBS2022



Positive allosteric modulator of AMPA receptors acting at a site distinct from that of 2,3-benzodiazepines.^{1,2} Clinically useful diuretic and antihypertensive agent.³ Induces robust epileptiform activity, inducing seizures but without neuronal death.^{4,5} Can be used to produce a new animal model for epilepsy.⁵

- 1) Donevan and Rogawski (1998), *Allosteric regulation of alpha-amino-3-hydroxy-5-methyl-4-isoxazole-propionate receptors by thiocyanate and cyclothiazide at a common modulatory site distinct from that of 2,3-benzodiazepines*; Neuroscience **87** 615
- 2) Desai *et al.* (1995), *Cyclothiazide acts at a site on the alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionic acid receptor complex that does not recognize competitive or noncompetitive AMPA receptor antagonists*; J. Pharmacol. Exp. Ther. **272** 38
- 3) Jeunemaitre *et al.* (1988), *Long-term metabolic effects of spironolactone and thiazides combined with potassium-sparing agents for treatment of essential hypertension*; Am. J. Cardiol. **62** 1072
- 4) Qi *et al.* (2006), *Cyclothiazide induces robust epileptiform activity in rat hippocampal neurons both in vitro and in vivo*; J. Physiol. **571** 605
- 5) Kong *et al.* (2010), *Cyclothiazide induces seizure behavior in freely moving rats*; Brain Res. **1355** 207

PHYSICAL DATA

Molecular Weight:	389.88
Molecular Formula:	C ₁₄ H ₁₆ ClN ₃ O ₄ S ₂
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 35 mg/ml), or Ethanol (up to 9 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at room temperature for up to 1 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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