

**Product Name:** Capsazepine

**Catalog No.:** 0464

**Batch No.:** 8

CAS Number: 138977-28-3

IUPAC Name: *N*-[2-(4-Chlorophenyl)ethyl]-1,3,4,5-tetrahydro-7,8-dihydroxy-2*H*-2-benzazepine-2-carbothioamide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>19</sub>H<sub>21</sub>ClN<sub>2</sub>O<sub>2</sub>S·½H<sub>2</sub>O

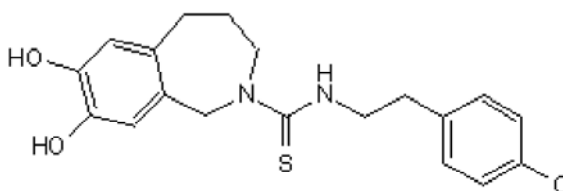
**Batch Molecular Weight:** 385.91

**Physical Appearance:** Off White solid

**Solubility:** ethanol to 25 mM  
DMSO to 100 mM

**Storage:** Store at RT

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.6 (Dichloromethane:Methanol [9:1])

**HPLC:** Shows >99.3% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	59.14	5.75	7.26
Found	59.36	5.49	7.25

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**Description:**

Selective vanilloid receptor antagonist ( $K_i = 3.2 \mu\text{M}$ ). Inhibits carrageenan inflammation-induced hyperalgesic responses in the rat. Also activates amiloride-sensitive epithelial  $\text{Na}^+$  channel ENaC $\delta$ .

**Physical and Chemical Properties:**

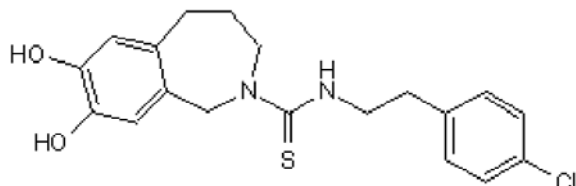
Batch Molecular Formula:  $\text{C}_{19}\text{H}_{21}\text{ClN}_2\text{O}_2\text{S} \cdot \frac{1}{2}\text{H}_2\text{O}$

Batch Molecular Weight: 385.91

Physical Appearance: Off White solid

**Minimum Purity:**  $\geq 99\%$

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

ethanol to 25 mM

DMSO to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Yamamura *et al*** (2004) Capsazepine is a novel activator of the  $\delta$  subunit of the human epithelial  $\text{Na}^+$  channel. *J.Biol.Chem.* **279** 44483. PMID: 15308635.

**Kwak *et al*** (1998) A capsaicin-receptor antagonist, capsazepine, reduces inflammation-induced hyperalgesic responses in the rat: evidence for an endogenous capsaicin-like substance. *Neuroscience* **86** 619. PMID: 9881874.

**Dickenson and Dray** (1991) Selective antagonism of capsaicin by capsazepine: evidence for a spinal receptor site in capsaicin-induced antinociception. *Br.J.Pharmacol.* **104** 1045. PMID: 1810591.

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