

PRODUCT INFORMATION



Capsazepine

Item No. 10007518

CAS Registry No.: 138977-28-3

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

MF: C₁₉H₂₁ClN₂O₂S

FW: 376.9

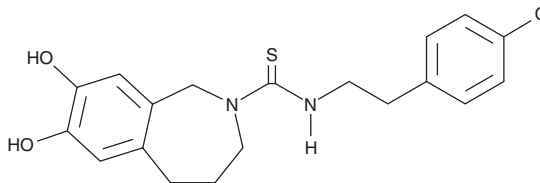
Purity: ≥98%

UV/Vis.: λ_{max}: 223, 249, 286 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Capsazepine is supplied as a crystalline solid. A stock solution may be made by dissolving the capsazepine in an organic solvent purged with an inert gas. Capsazepine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of capsazepine in these solvents is approximately 20 mg/ml.

Capsazepine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, capsazepine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Capsazepine has a solubility of approximately 0.45 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Transient receptor potential vanilloid type 1 (TRPV₁) is a member of the transient receptor potential (TRP) family that is activated or sensitized by a variety of endogenous stimuli as a result of tissue injury and inflammation. TRPV₁ is upregulated during inflammation and plays a role in the perception of pain.^{1,2} Capsazepine is a competitive antagonist of TRPV₁ which blocks the capsaicin-induced uptake of Ca²⁺ in neonatal rat dorsal root ganglia with an IC₅₀ of 0.42 μM and Chinese hamster ovary cells with an IC₅₀ of 17 nM.^{1,3} It does not block acid- or heat-induced activation of TRPV₁ and may block receptors other than TRPV₁.^{4,5}

References

1. Doherty, E.M., Fotsch, C., Bo, Y., et al. *J. Med. Chem.* **48**, 71-90 (2005).
2. Walker, KM., Urban, L., Medhurst, S.J., et al. *J. Pharmacol. Exp. Ther.* **304**(1), 56-60 (2003).
3. Walpole, S.J., Bevan, S., Bovermann, G., et al. *J. Med. Chem.* **37**, 1942-1954 (1994).
4. Liu, L. and Simon, S.A. *Neurosci. Lett.* **228**, 29-32 (1997).
5. Docherty, R.J., Yeats, J.C., and Piper, A.S. *Br. J. Pharmacol.* **121**, 1461-1467 (1997).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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