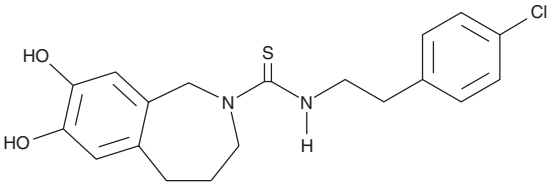
PRODUCT INFORMATION

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: $C_{19}H_{21}ClN_2O_2S$
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 ($TRPV_1$) 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. $TRPV_1$ is upregulated during inflammation and plays a role in the perception of pain.[1,2] Capsazepine is a competitive antagonist of $TRPV_1$ which blocks the capsaicin-induced uptake of Ca^{2+} in neonatal rat dorsal root ganglia with an IC_{50} of 0.42 µM and Chinese hamster ovary cells with an IC_{50} of 17 nM.[1,3] It does not block acid- or heat-induced activation of $TRPV_1$ and may block receptors other than $TRPV_1$.[4,5]

References

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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).

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