

Product Data Sheet

Product Name: Triamterene

Cat. No.: GC12254

Chemical Properties

Cas. No. 396-01-0

Chemical Name 6-phenylpteridine-2,4,7-triamine

SMILES C1=CC=C(C=C1)C2=NC3=C(N=C2N)N=C(N=C3N)N

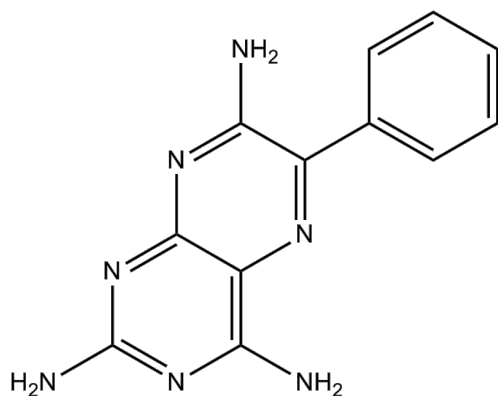
Formula $C_{12}H_{11}N_7$ M.Wt 253.26

Solubility $\geq 7.85\text{mg/mL}$ in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Triamterene blocks epithelial Na^+ channel (ENaC) in a voltage-dependent manner, which is used as a mild diuretic. Target: Sodium Channel. Triamterene blocked rENaC in a voltage-dependent manner, and was 100-fold less potent than amiloride at pH 7.5. At -90 mV and -40 mV , the IC_{50} values were $5\text{ }\mu\text{M}$ and $10\text{ }\mu\text{M}$, respectively. The blockage by triamterene, which is a weak base with a pK_a of 6.2, was dependent on the extracellular pH. The IC_{50} was $1\text{ }\mu\text{M}$ at pH 6.5 and only $17\text{ }\mu\text{M}$ at pH 8.5 [1]. Triamterene (TA) is partly eliminated by a first-pass-effect. The main metabolite of TA is

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OH-TA-ester, which is pharmacologically active [2].

References:

- [1]. Busch, A.E., et al., Blockade of epithelial Na⁺ channels by triamterenes - underlying mechanisms and molecular basis. *Pflugers Arch*, 1996. 432(5): p. 760-6.
- [2]. Gilfrich, H.J., et al., Pharmacokinetics of triamterene after i.v. administration to man: determination of bioavailability. *Eur J Clin Pharmacol*, 1983. 25(2): p. 237-41.

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