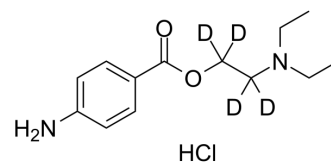


Procaine-d4 hydrochloride

Cat. No.:	HY-B0546AS
Molecular Formula:	C ₁₃ H ₁₇ D ₄ ClN ₂ O ₂
Molecular Weight:	276.8
Target:	Histone Demethylase; DNA/RNA Synthesis
Pathway:	Epigenetics; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Procaine-d4 hydrochloride is the deuterium labeled Procaine hydrochloride. Procaine hydrochloride is a DNA-demethylating agent. Procaine hydrochloride acts through multiple targets and has a slow onset and a short duration of action ^{[1][2]} .
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Fan, P. and F.F. Weight, Procaine impairs the function of 5-HT3 receptor-ion channel complex in rat sensory ganglion neurons. *Neuropharmacology*, 1994. 33(12): p. 1573-9.
- [3]. Villar-Garea, A., et al., Procaine is a DNA-demethylating agent with growth-inhibitory effects in human cancer cells. *Cancer Res*, 2003. 63(16): p. 4984-9.
- [4]. Adamec, R.E. and C. Stark-Adamec, The effects of procaine HCl on population cellular and evoked response activity within the limbic system of the cat. Evidence for differential excitatory action of procaine in a variety of limbic circuits. *Prog Neuropsychopharmacol Biol Psychiatry*, 1987. 11(4): p. 345-64.

Caution: Product has not been fully validated for medical applications. For research use only.

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