Product Data Sheet

Product Name: (Rac)-5-Hydroxymethyl Tolterodine
Cat. No.: GC63452

Chemical Properties

Cas. No.	200801-70-3		
Formula	$C_{22}H_{31}NO_2$	M.Wt	341.49
Solubility	DMSO : 100 mg/mL (292.83 mM; Need ultrasonic)	Storage	4°C, away from moisture
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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

(Rac)-5-Hydroxymethyl Tolterodine ((Rac)-Desfesoterodine), an active metabolite of Tolterodine, is a mAChR antagonist (Ki values of 2.3 nM, 2 nM, 2.5 nM, 2.8 nM, and 2.9 nM for M1, M2, M3, M4, and M5 receptors, respectively). (Rac)-5-Hydroxymethyl Tolterodine can be used for overactive bladder research[1].

In vitro, (Rac)-5-Hydroxymethyl Tolterodine (PNU-200577) produces a competitive and concentration-dependent inhibition of carbachol-induced contraction of guinea-pig isolated urinary bladder strips (KB of 0.84 nM; pA2 of 9.14)[2].

(Rac)-5-Hydroxymethyl Tolterodine (5-HMT; 0.88 μmol/kg; i.v.) treatment shows the binding activity of (Rac)-5-Hydroxymethyl Tolterodine to muscarinic receptors is significantly observed in all tissues, except cerebral cortex, with a longer duration in bladder[3].

[1]. L Nilvebrant, et al. Antimuscarinic potency and bladder selectivity of PNU-200577, a major metabolite of tolterodine. Pharmacol Toxicol. 1997 Oct;81(4):169-72.
[2]. B Malhotra, et al. The design and development of fesoterodine as a prodrug of 5-hydroxymethyl tolterodine (5-HMT), the active metabolite of tolterodine. Curr Med

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Chem. 2009;16(33):4481-9.
[3]. Shizuo Yamada, et al. Muscarinic receptor binding of fesoterodine, 5-hydroxymethyl tolterodine, and tolterodine in rat tissues after the oral, intravenous, or intravesical administration. J Pharmacol Sci. 2019 May;140(1):73-78.

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