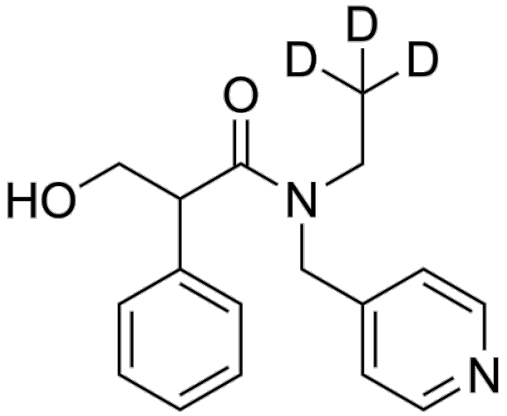
Product Data Sheet

Product Name: Tropicamide-d3
Cat. No.: GC71641

Chemical Properties

Cas. No.	2673270-13-6		
Formula	$C_{17}H_{17}D_3N_2O_2$	M.Wt	287.37
Solubility	DMSO : 100 mg/mL (347.98 mM; Need ultrasonic); Ethanol : ≥ 30 mg/mL (104.40 mM); DMSO : ≥ 30 mg/mL (104.40 mM); DMF : ≥ 30 mg/mL (104.40 mM); Ethanol:PBS(pH 7.2) (1:1) : ≥ 0.5 mg/mL (1.74 mM)	Storage	-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

Tropicamide-d3 is the deuterium labeled Tropicamide[1]. Tropicamide (Ro 1-7683) is a selective M4 muscarinic acetylcholine receptor antagonist. Tropicamide produces short acting mydriasis (dilation

of the pupil) and cycloplegia when applied as eye drops[2][3].

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].

References:
[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.
[2]. Lazareno, S., N.J. Buckley, and F.F. Roberts, Characterization of muscarinic M4 binding sites in rabbit lung, chicken heart, and NG108-15 cells. Mol Pharmacol, 1990. 38(6): p. 805-15.
[3]. Hernandez, M., et al., Different muscarinic receptor subtypes mediating the phasic activity and basal tone of pig isolated intravesical ureter. Br J Pharmacol, 1993. 110(4): p. 1413-20.