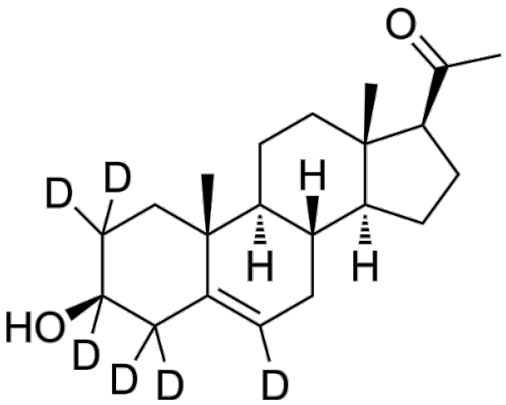
Product Data Sheet

Product Name: Pregnenolone-d 6
Cat. No.: GC80473

Chemical Properties

Cas. No.			
Formula	$C_{21}H_{26}D_6O_2$	M.Wt	322.51
Solubility		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

Pregnenolone -d 6 (3β-Hydroxy-5-pregnen-20-one-d 6) is the deuterium labeled Pregnenolone [1]. Pregnenolone (3β-Hydroxy-5-pregnen-20-one) is a powerful neurosteroid, the main precursor of various steroid hormones including steroid ketones. Pregnenolone acts as a signaling-specific inhibitor of cannabinoid CB1 receptor, inhibits the effects of tetrahydrocannabinol (THC) that are mediated by the CB1 receptors. Pregnenolone can protect the brain from cannabis intoxication [2]

Caution: Product has not been fully validated for medical applications. For research use only.
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[3]. Pregnenolone is also a TRPM3 channel activator, and also can weakly activate TRPM1 channels [4].

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].

References:
[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.
[2]. Vallée M, et al. Pregnenolone can protect the brain from cannabis intoxication. Science. 2014 Jan 3;343(6166):94-8.
[3]. Ducharme N, et al. Brain distribution and behavioral effects of progesterone and pregnenolone after intranasal or intravenous administration. Eur J Pharmacol. 2010 Sep 1641(2-3):128-34.
[4]. Alan Shiels. TRPM3_miR-204: a complex locus for eye development and disease. Hum Genomics. 2020 Feb 1814(1):7.