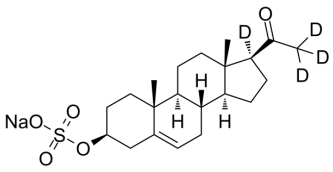
Pregnenolone monosulfate-d4 sodium

Cat. No.:	HY-110189S1
CAS No.:	1485492-21-4
Molecular Formula:	$C_{21}H_{27}D_4NaO_5S$
Molecular Weight:	422.55
Target:	Cannabinoid Receptor; TRP Channel; Endogenous Metabolite; Autophagy
Pathway:	GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Pregnenolone monosulfate-d4 (sodium) is the deuterium labeled Pregnenolone monosulfate. Pregnenolone monosulfate sodium (3β-Hydroxy-5-pregnen-20-one monosulfate sodium) is a powerful neurosteroid, the main precursor of various steroid hormones including steroid ketones. Pregnenolone monosulfate sodium acts as a signaling-specific inhibitor of cannabinoid CB1 receptor, inhibits the effects of tetrahydrocannabinol (THC) that are mediated by the CB1 receptors. Pregnenolone monosulfate sodium can protect the brain from cannabis intoxication[1][2]. Pregnenolone monosulfate sodium is also a TRPM3 channel activator, and also can weakly activate TRPM1 channels[3].
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]. Ducharme N, et al. Brain distribution and behavioral effects of progesterone and pregnenolone after intranasal or intravenous administration. Eur J Pharmacol. 2010 Sep 1;641(2-3):128-34.

[3]. Alan Shiels. TRPM3_miR-204: a complex locus for eye development and disease. Hum Genomics. 2020 Feb 18;14(1):7.

[4]. Vallée M, et al. Pregnenolone can protect the brain from cannabis intoxication. Science. 2014 Jan 3;343(6166):94-8.

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