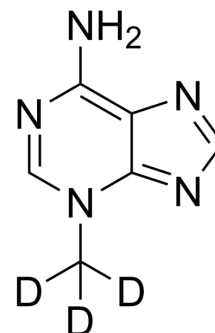


3-Methyladenine-d₃

Cat. No.:	HY-19312S
CAS No.:	110953-39-4
Molecular Formula:	C ₆ H ₄ D ₃ N ₅
Molecular Weight:	152.17
Target:	PI3K; Autophagy; Mitophagy; Endogenous Metabolite
Pathway:	PI3K/Akt/mTOR; Autophagy; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 41.67 mg/mL (273.84 mM; ultrasonic and warming and heat to 60°C)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	6.5716 mL	32.8580 mL	65.7160 mL
5 mM	1.3143 mL	6.5716 mL	13.1432 mL
10 mM	0.6572 mL	3.2858 mL	6.5716 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

3-Methyladenine-d₃ is the deuterium labeled 3-Methyladenine[1]. 3-Methyladenine (3-MA) is a PI3K inhibitor. 3-Methyladenine is a widely used inhibitor of autophagy via its inhibitory effect on class III PI3K[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 Feb;53(2):211-216.
- [2]. Miller S, et al. Finding a fitting shoe for Cinderella: searching for an autophagy inhibitor. *Autophagy*. 2010 Aug;6(6):805-7.
- [3]. Hou H, et al. Inhibitors of phosphatidylinositol 3'-kinases promote mitotic cell death in HeLa cells. *PLoS One*. 20127(4):e35665.

[4]. Wang X, et al. Acanthopanax versus 3-Methyladenine Ameliorates Sodium Taurocholate-Induced Severe Acute Pancreatitis by Inhibiting the Autophagic Pathway in Rats. *Mediators Inflamm.* 2016;2016:8369704.

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

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